



020859-001310US, Appln No. 10/616,896
Daniel Mao, Reg. No. 51,995
Telephone: 650-326-2400
Title: Improved Method and System...
Inventors: Stephen R. Quake et al.

1/38

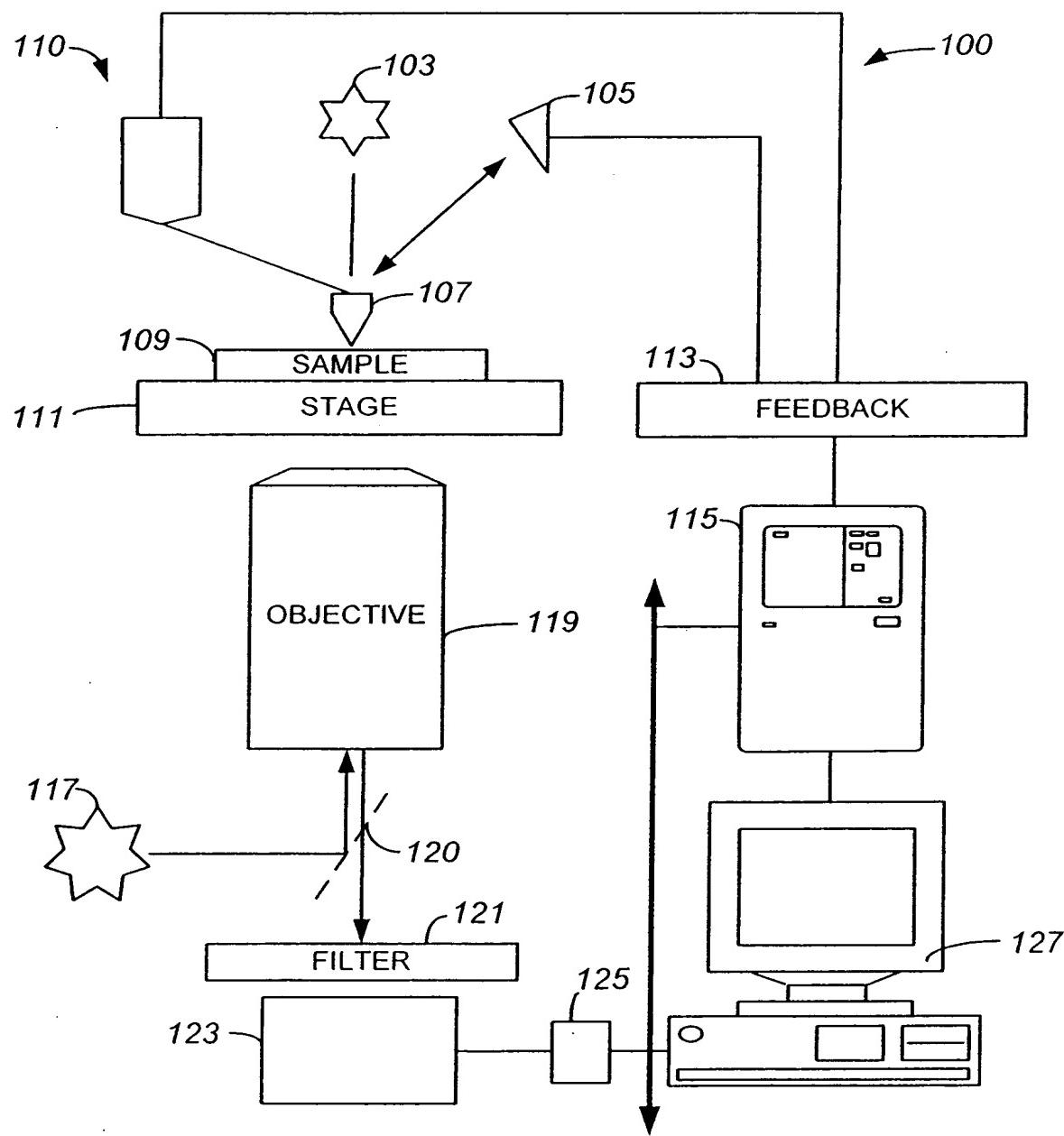


FIG. 1

2/38

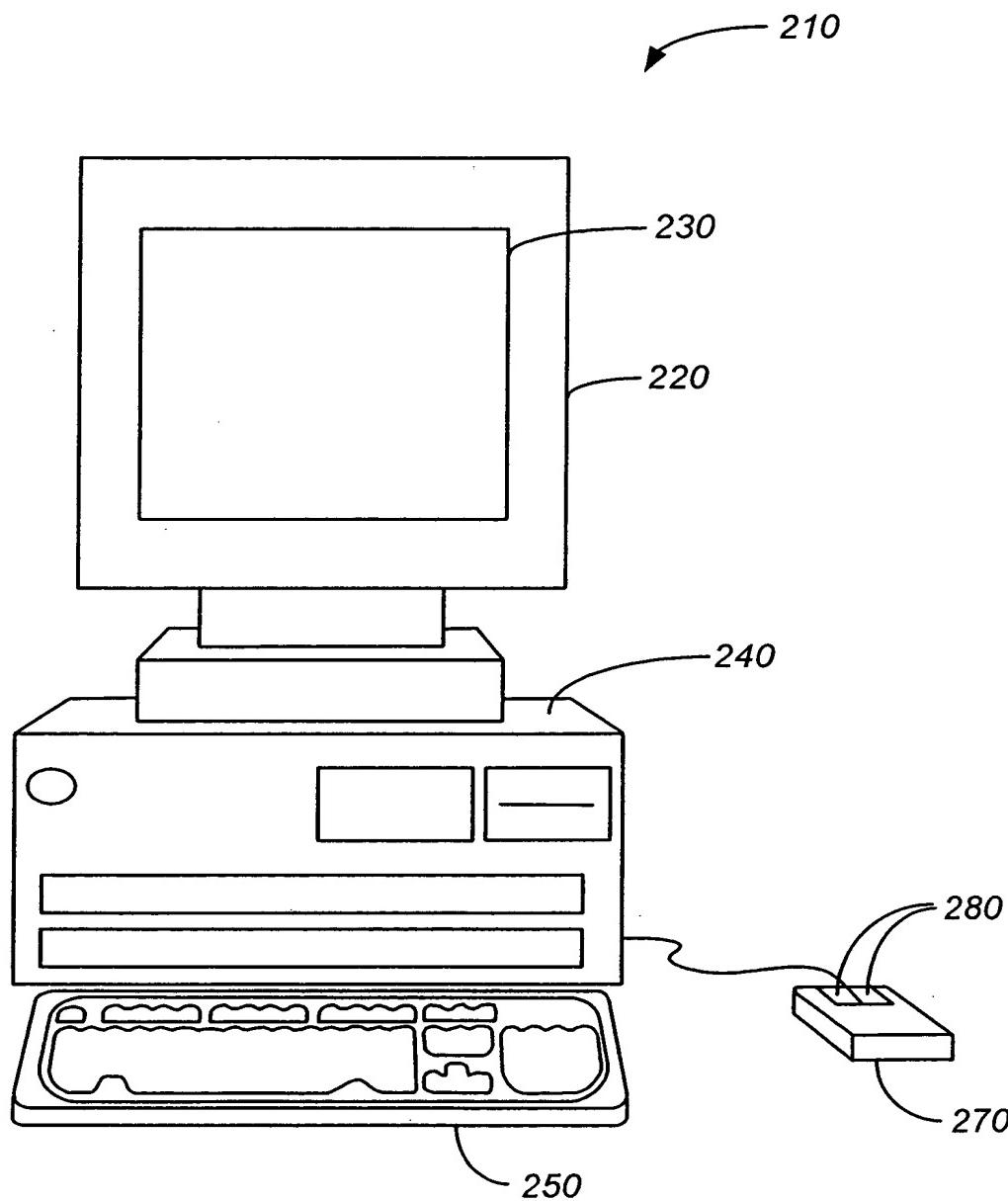


FIG. 2

210

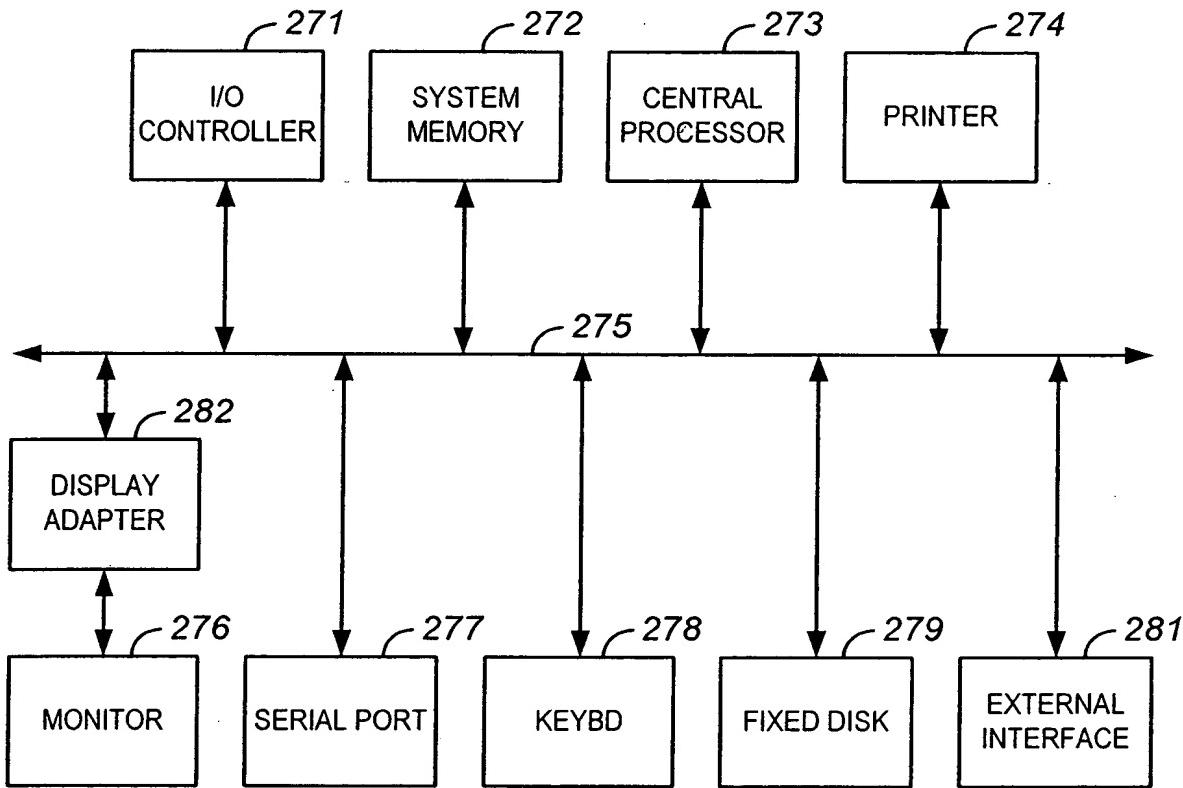


FIG. 2A

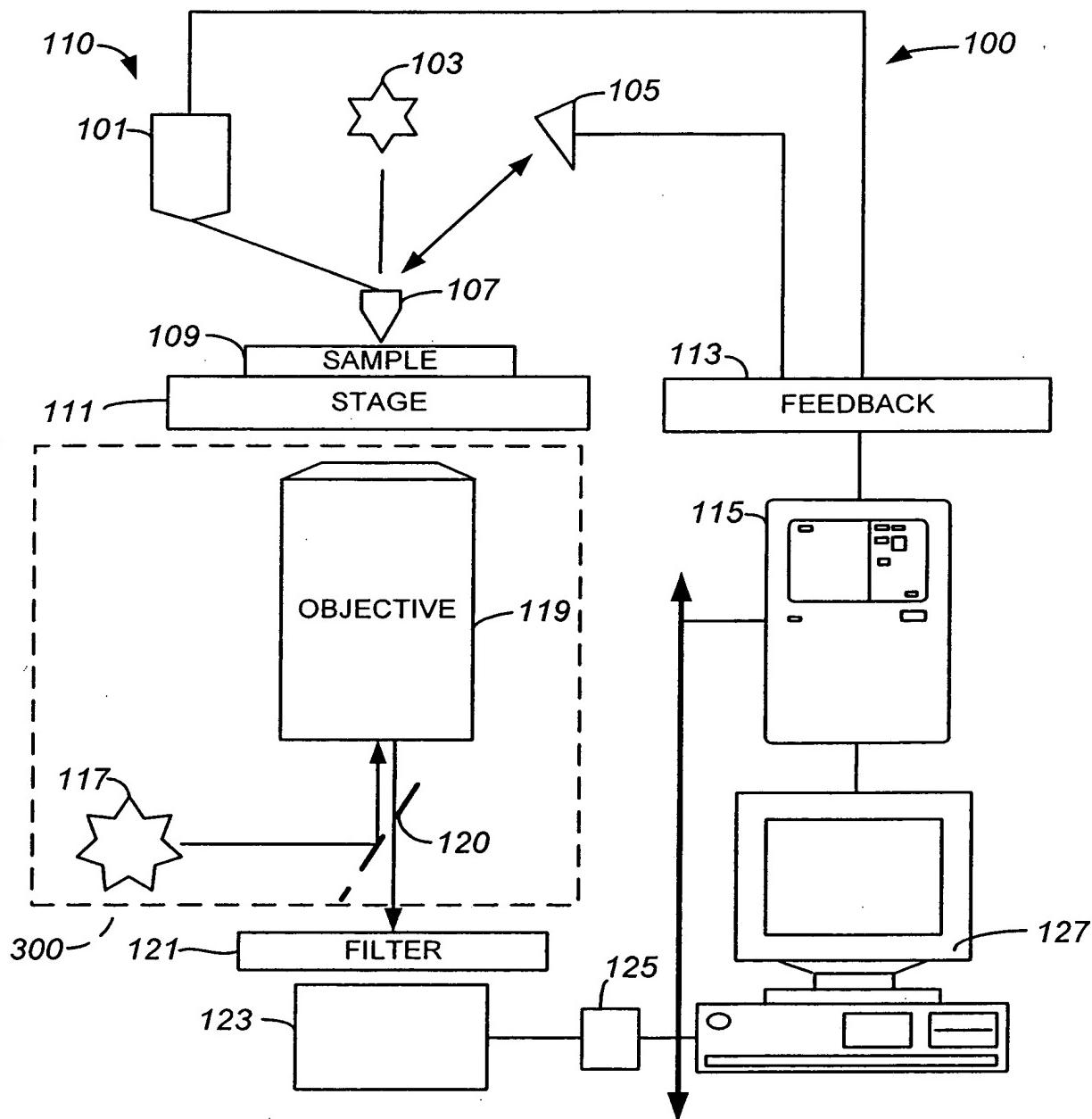


FIG. 3

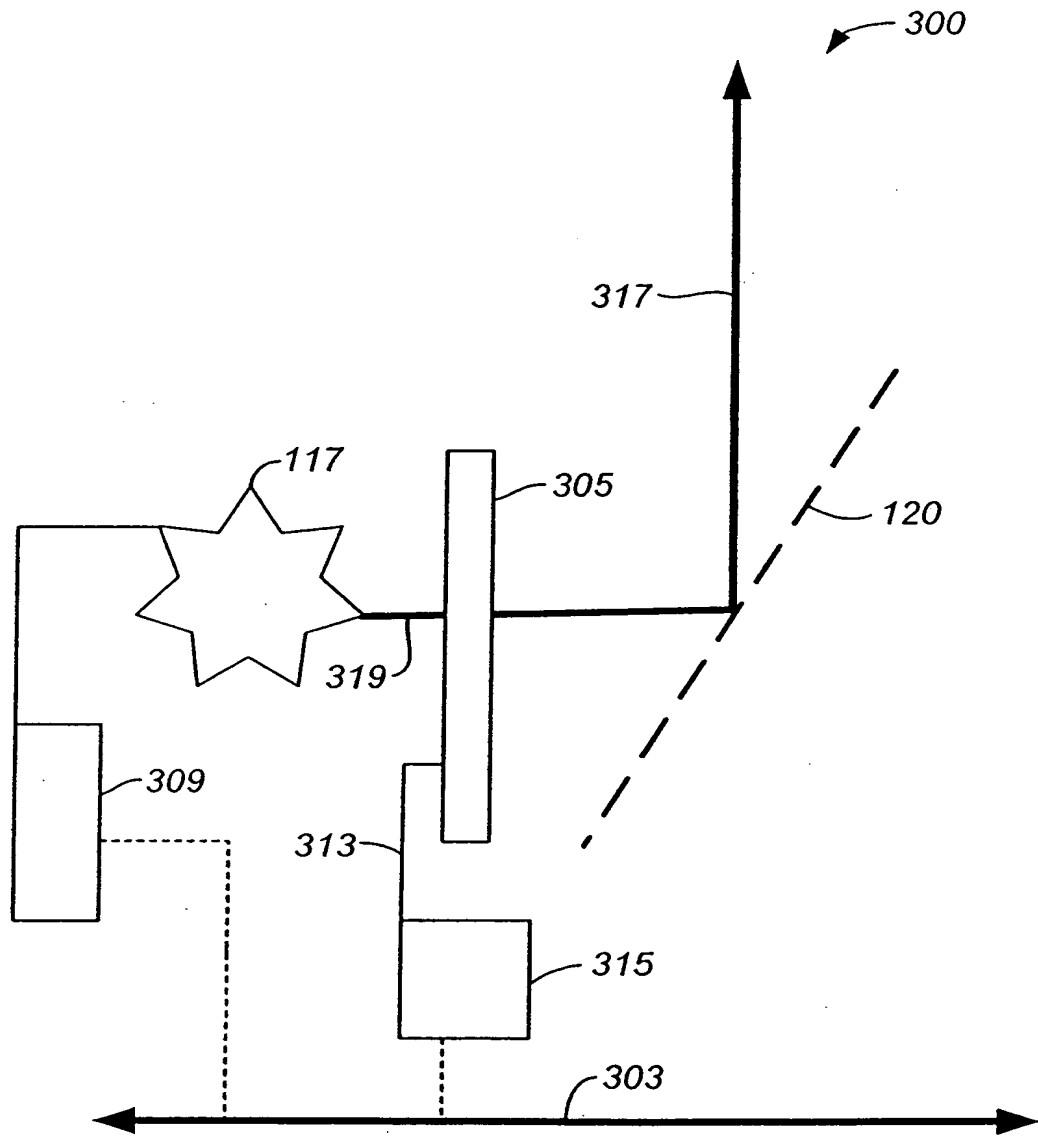


FIG. 3A

6/38

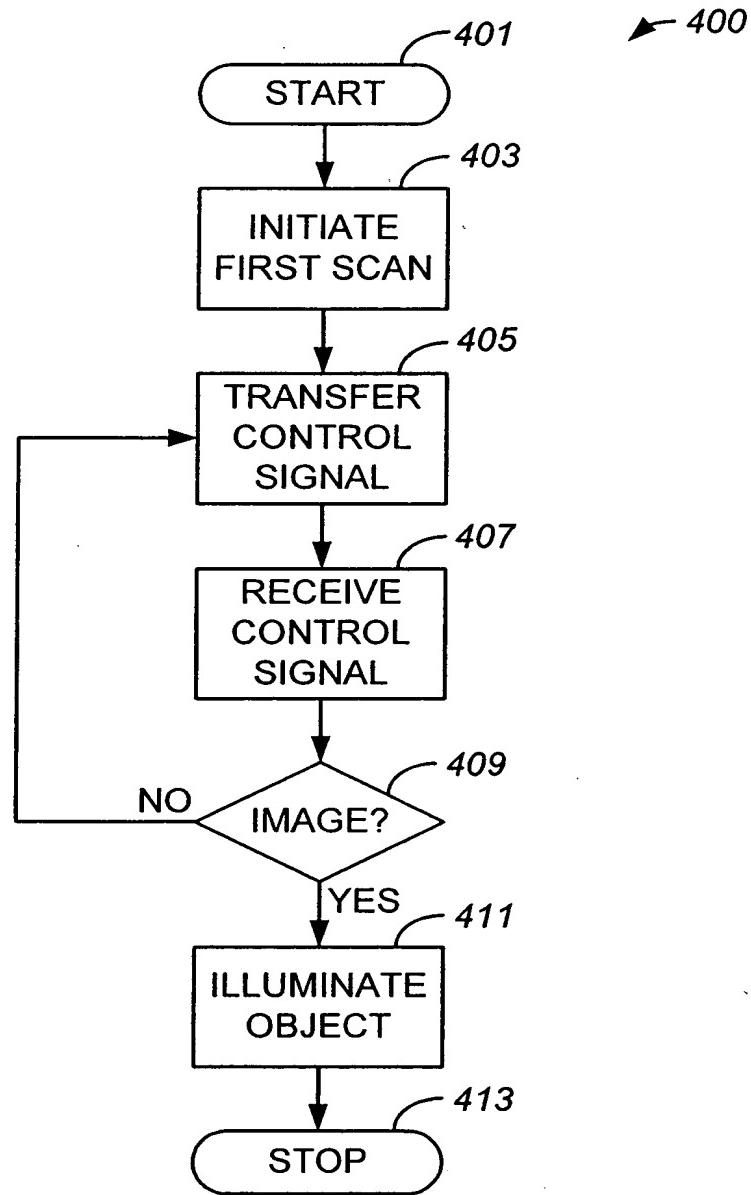


FIG. 4

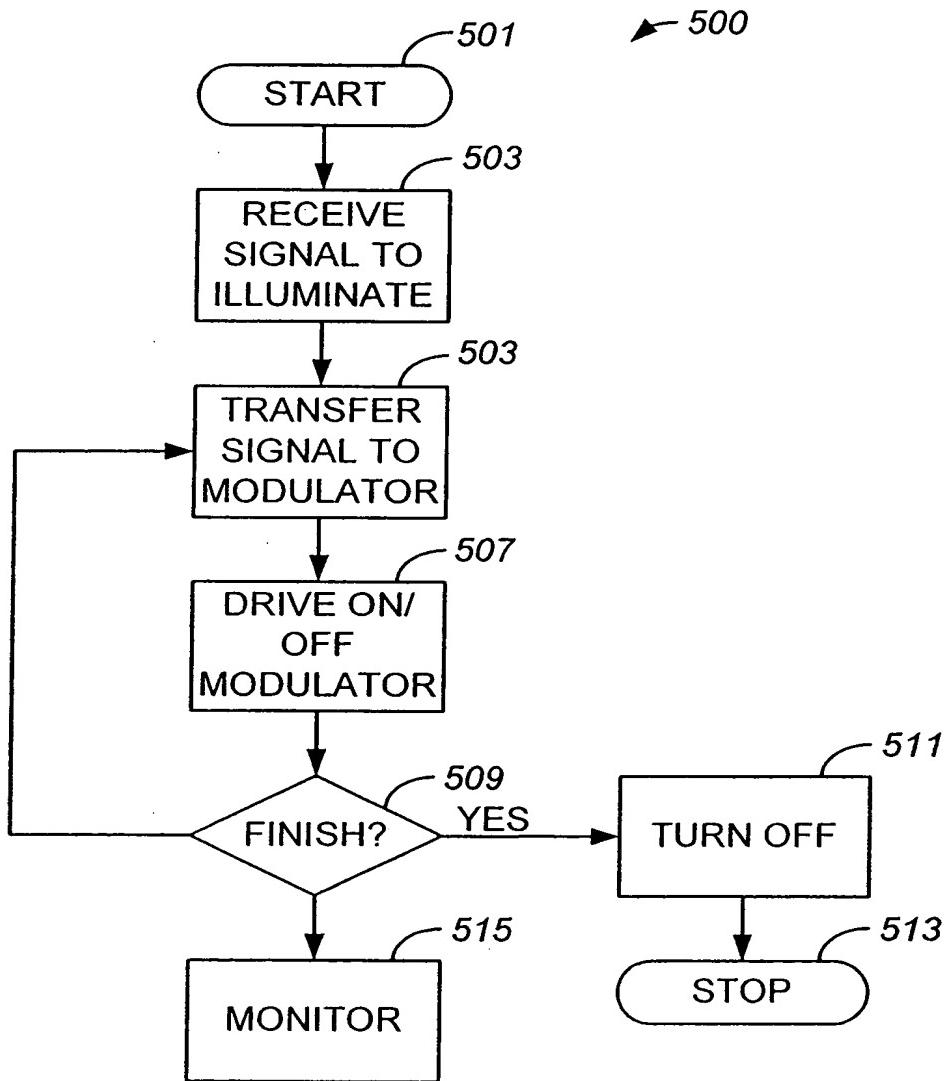


FIG. 5

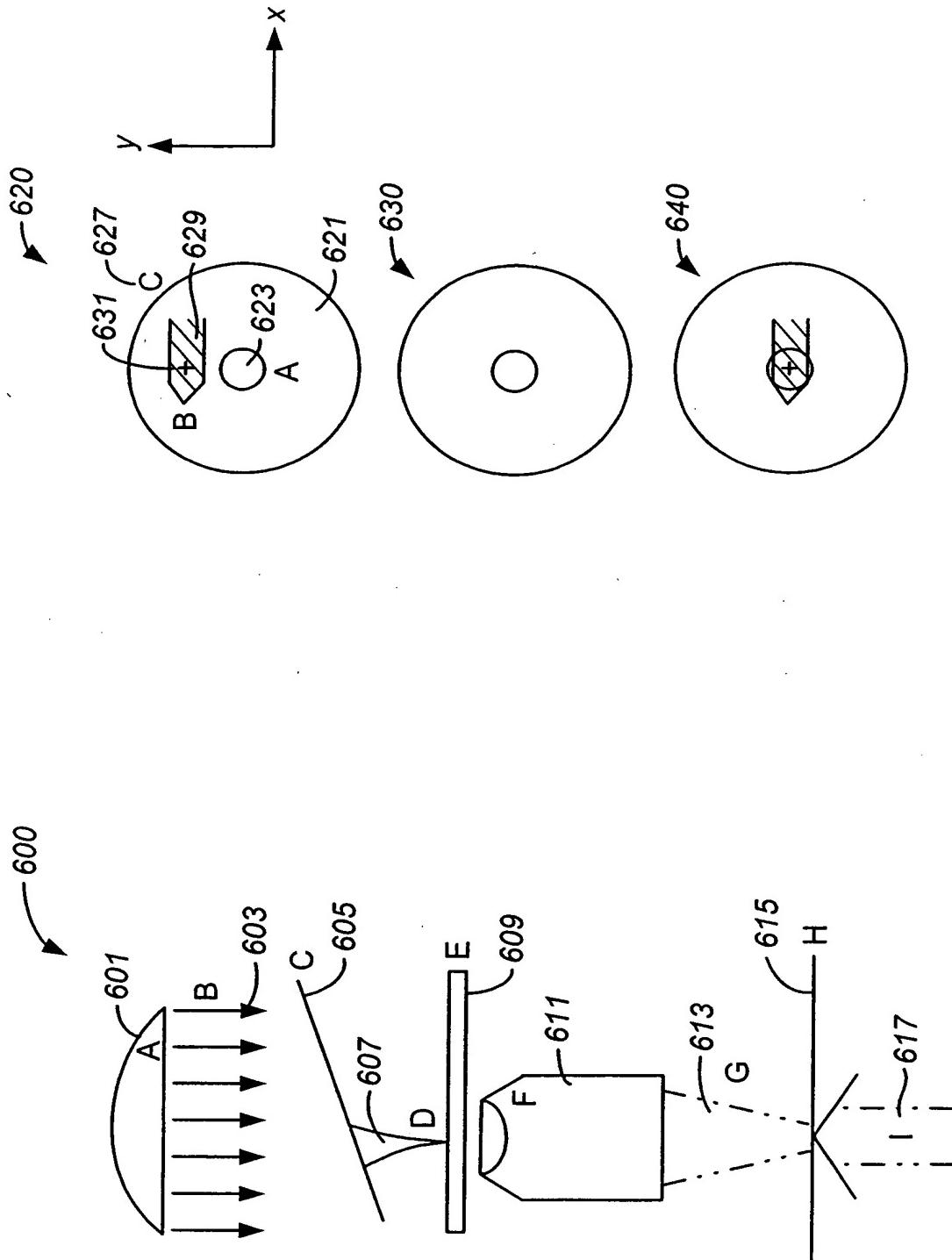


FIG. 6

9/38

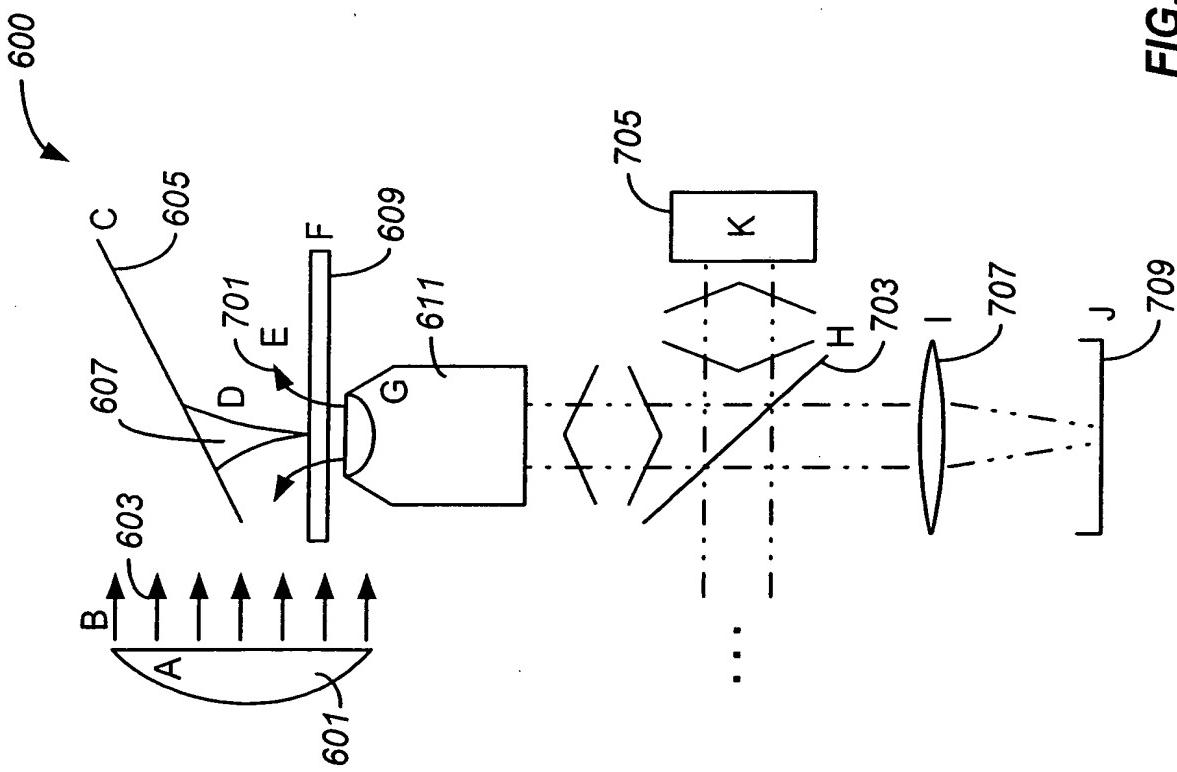
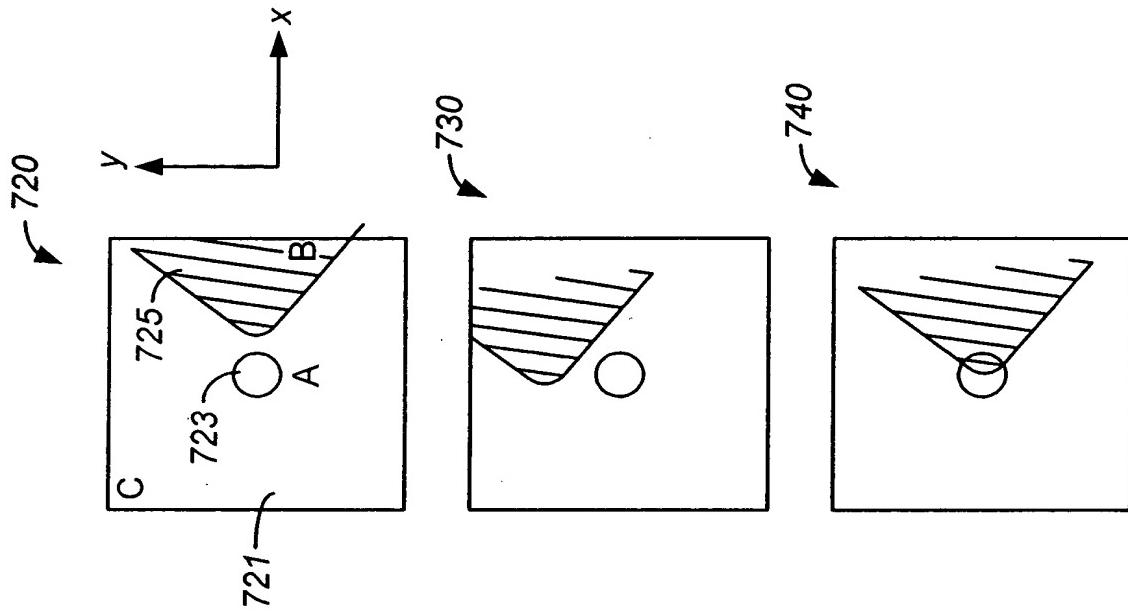


FIG. 7

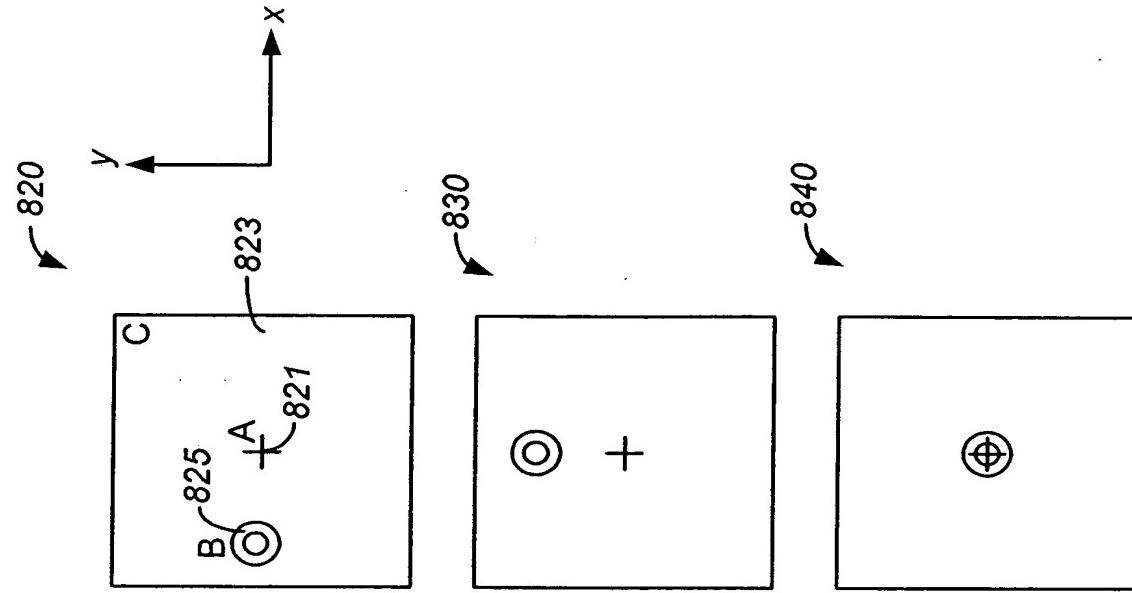
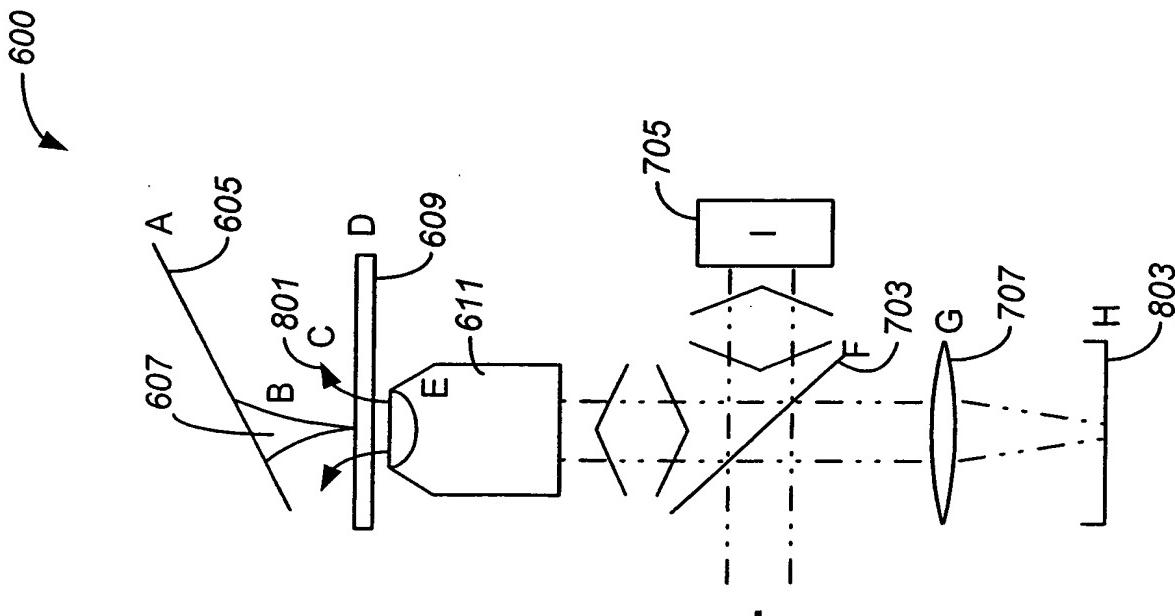


FIG. 8



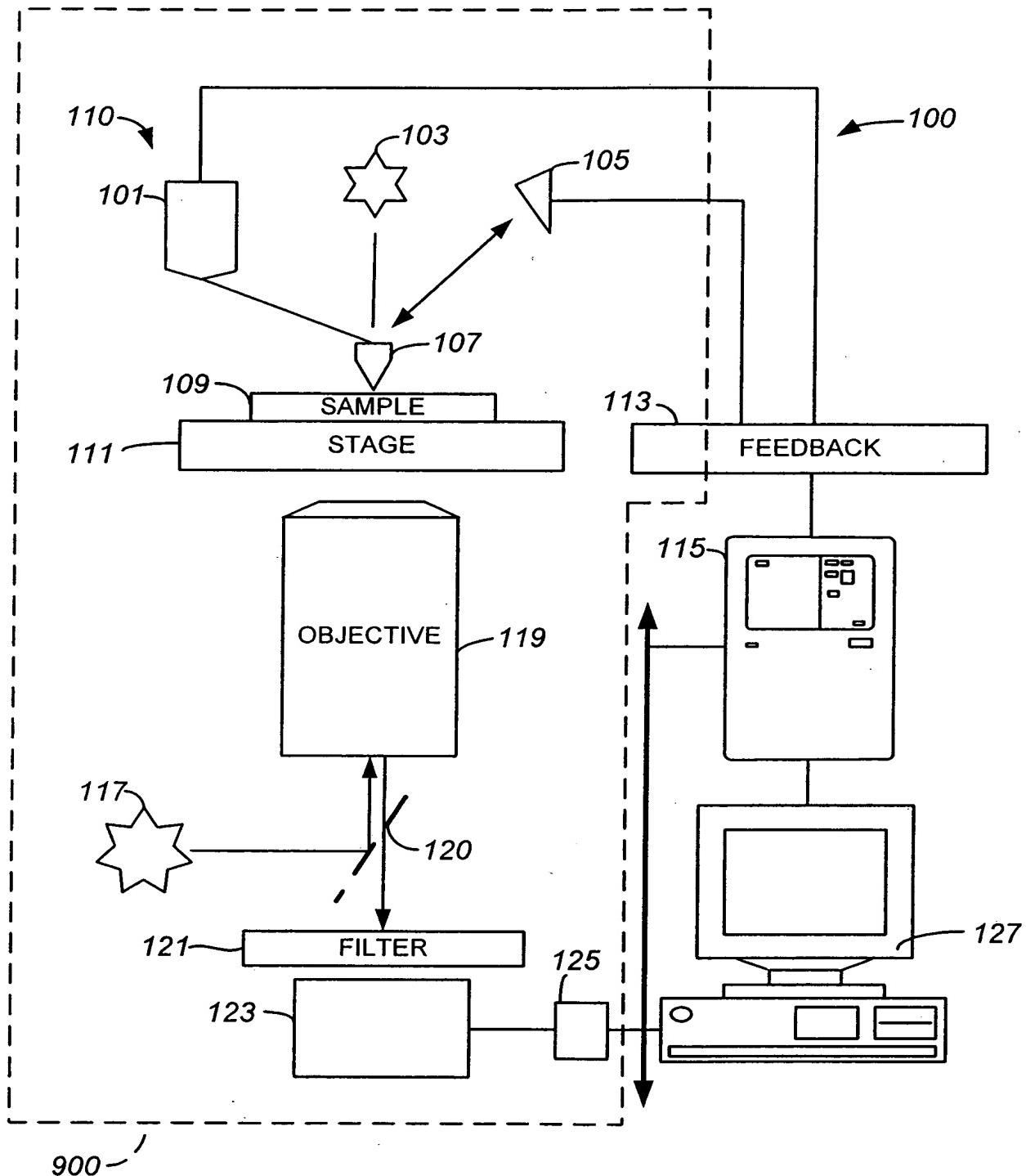


FIG. 9

020859-001310US, Appn No. 10/616,896
Daniel Mao, Reg. No. 51,995
Telephone: 650-326-2400
Title: Improved Method and System...
Inventors: Stephen R. Quake et al.

12/38

← 900

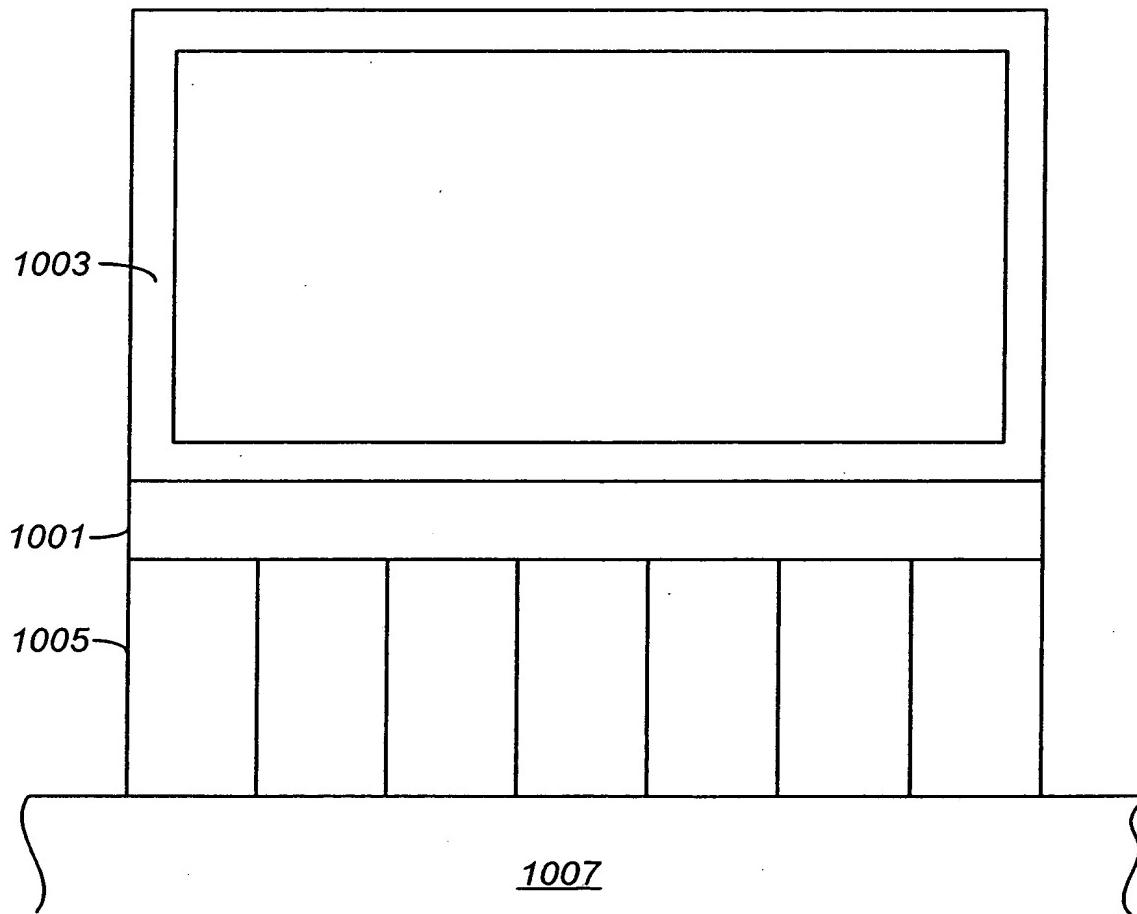


FIG. 10

13/38

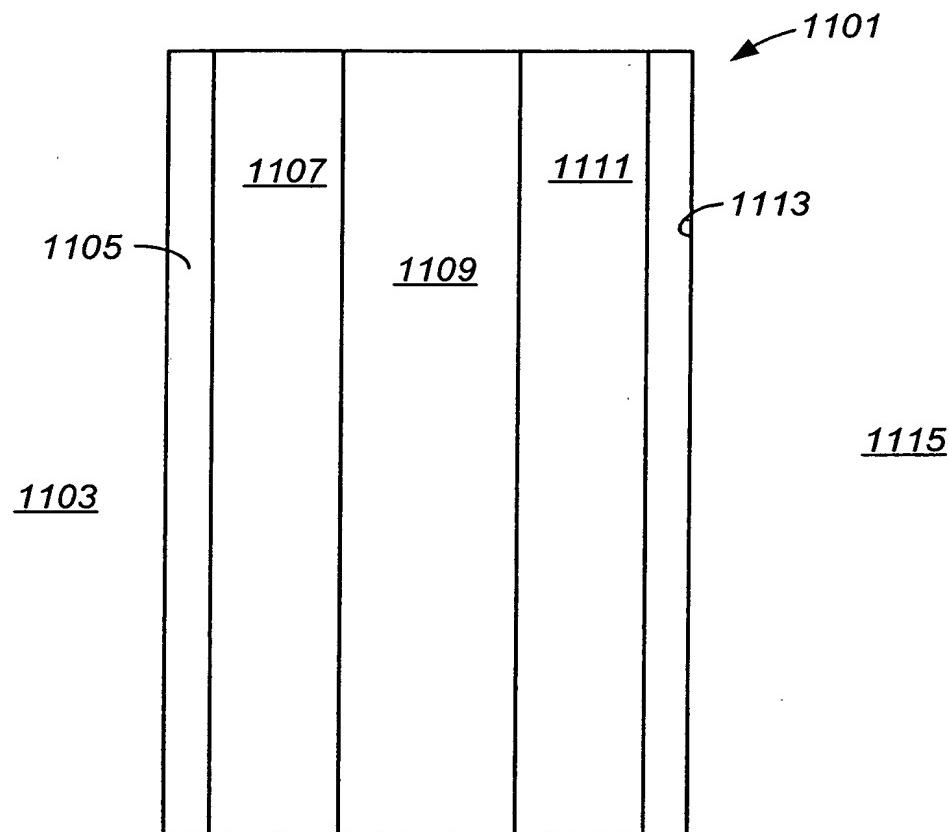


FIG. 11

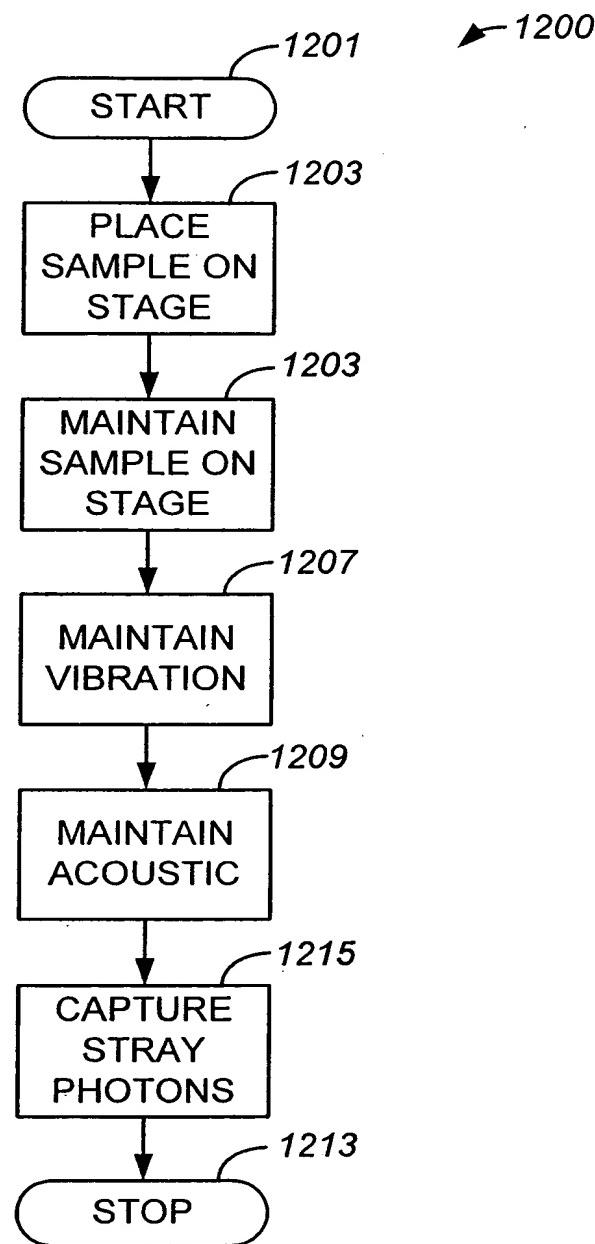


FIG. 12

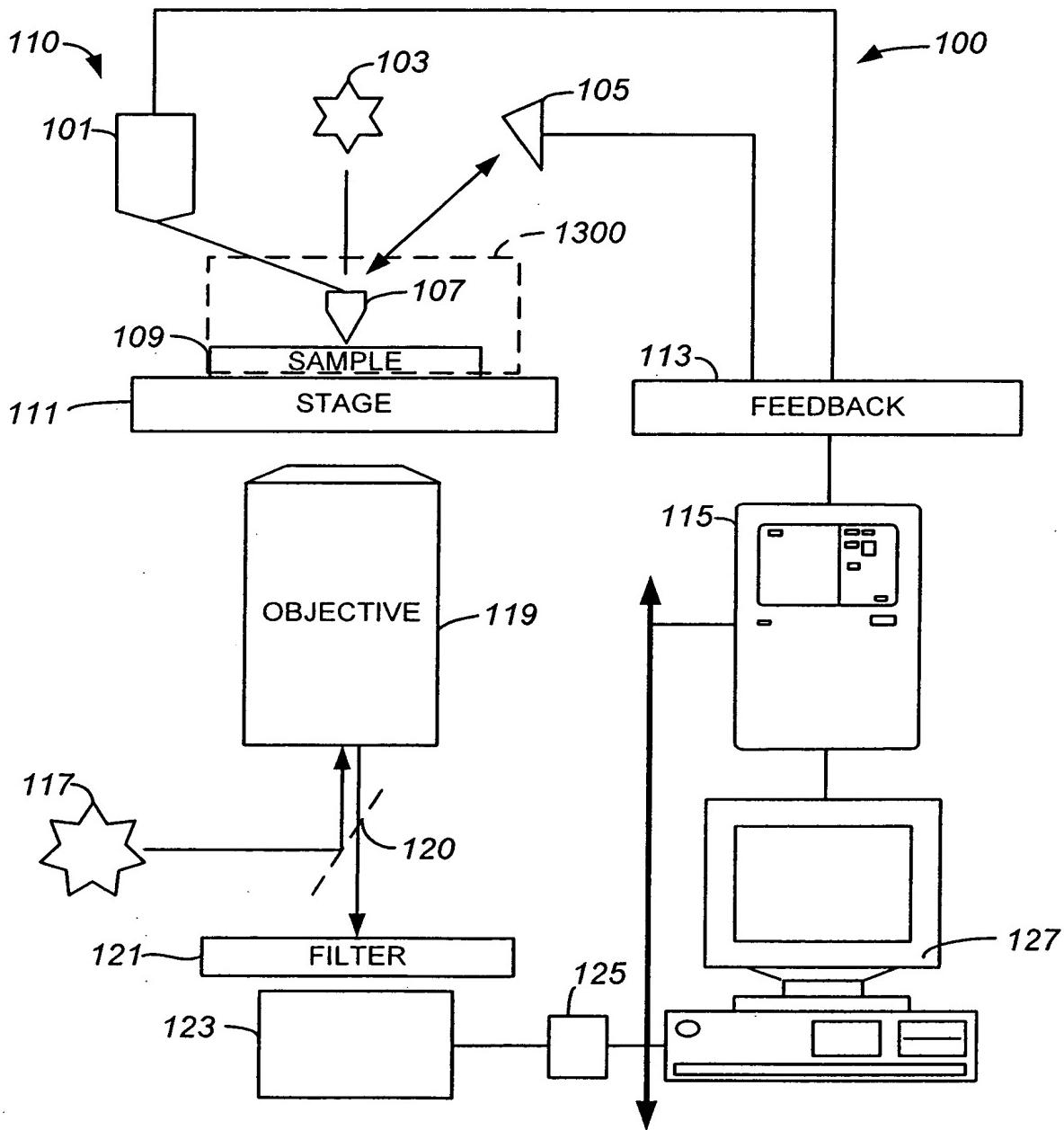


FIG. 13

16/38

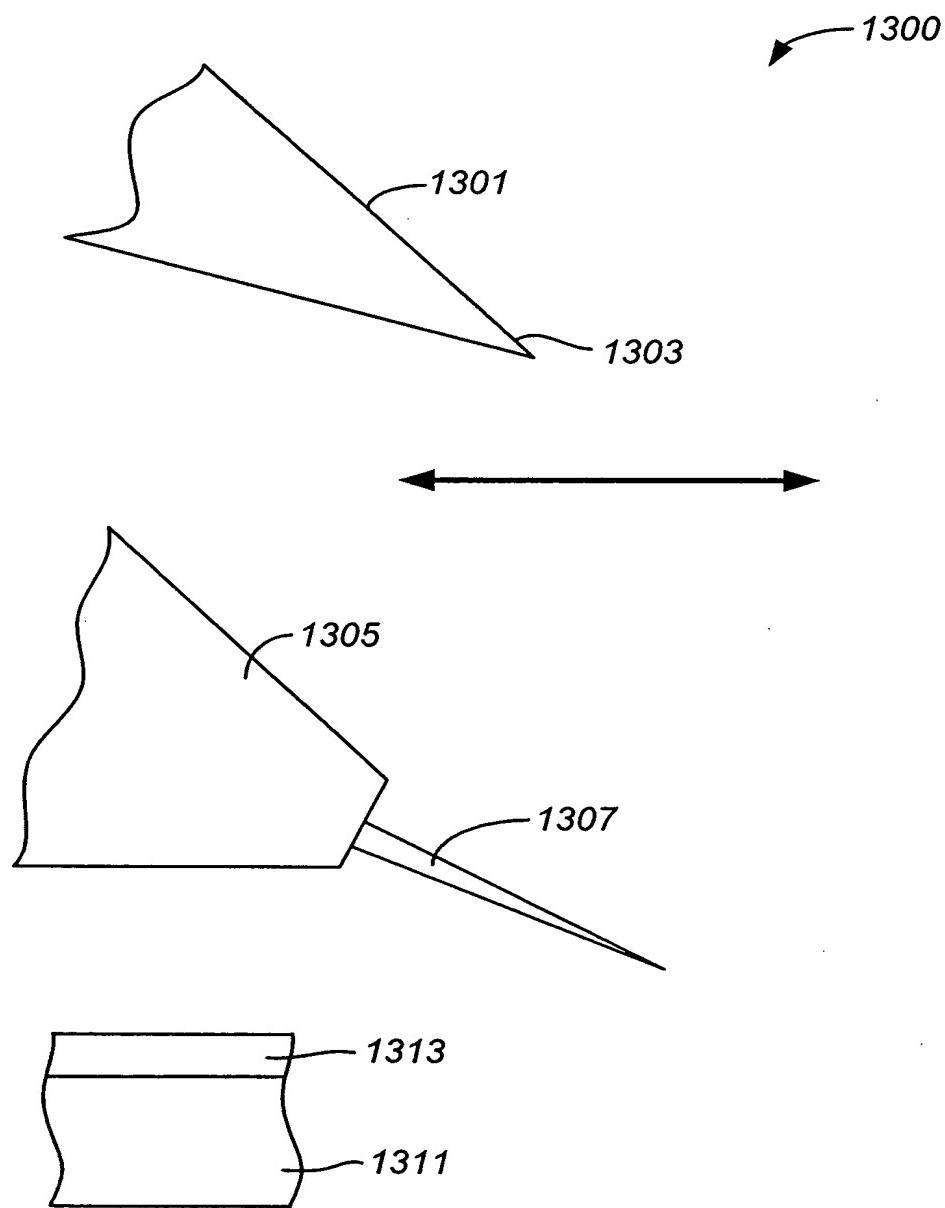


FIG. 14

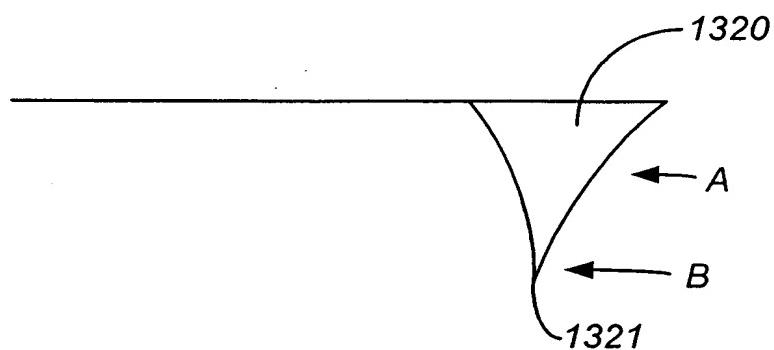


FIG. 14A

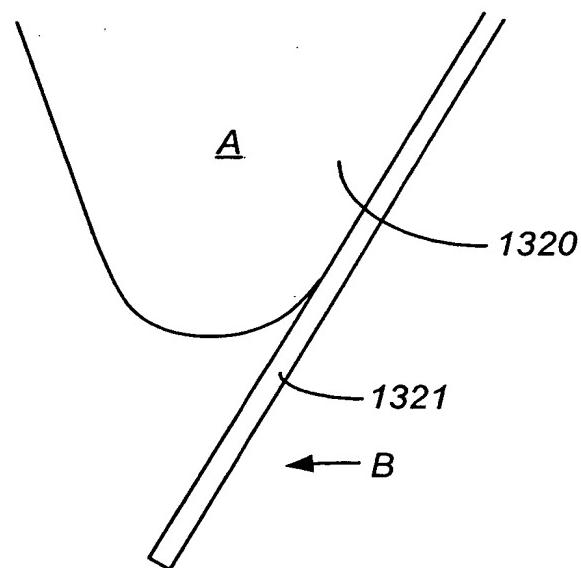


FIG. 14B

020859-001310US, Appln No. 10/616,896
Daniel Mao, Reg. No. 51,995
Telephone: 650-326-2400
Title: Improved Method and System...
Inventors: Stephen R. Quake et al.

18/38

1401



FIG. 14C

1403



FIG. 14D

020859-001310US, Appln No. 10/616,896
Daniel Mao, Reg. No. 51,995
Telephone: 650-326-2400
Title: Improved Method and System...
Inventors: Stephen R. Quake et al.

19/38

1405

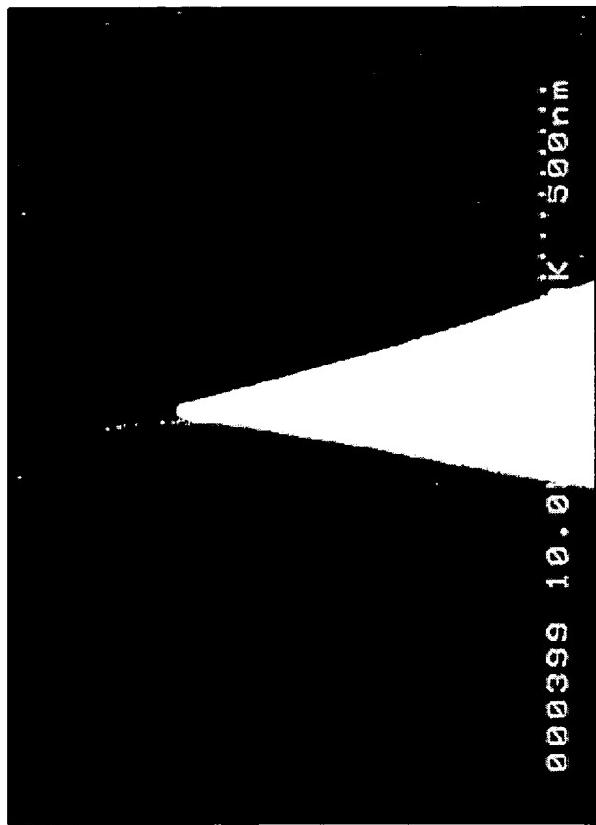


FIG. 14E

20/38

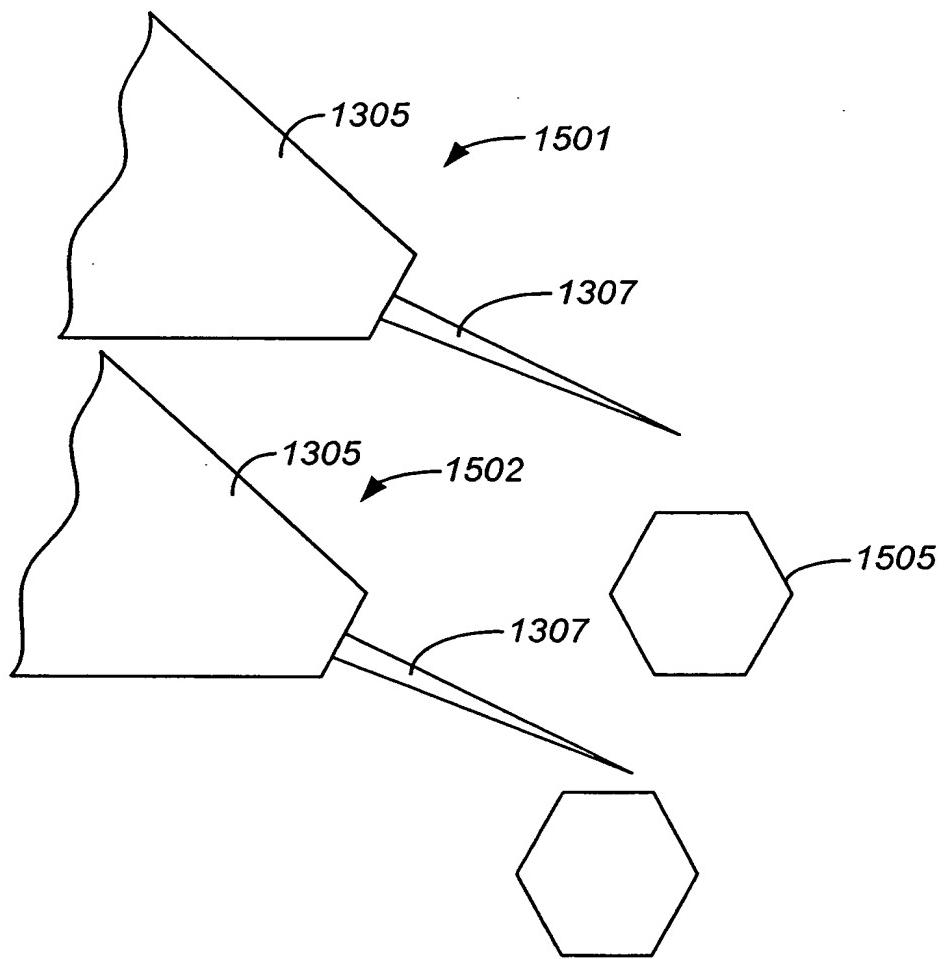


FIG. 15

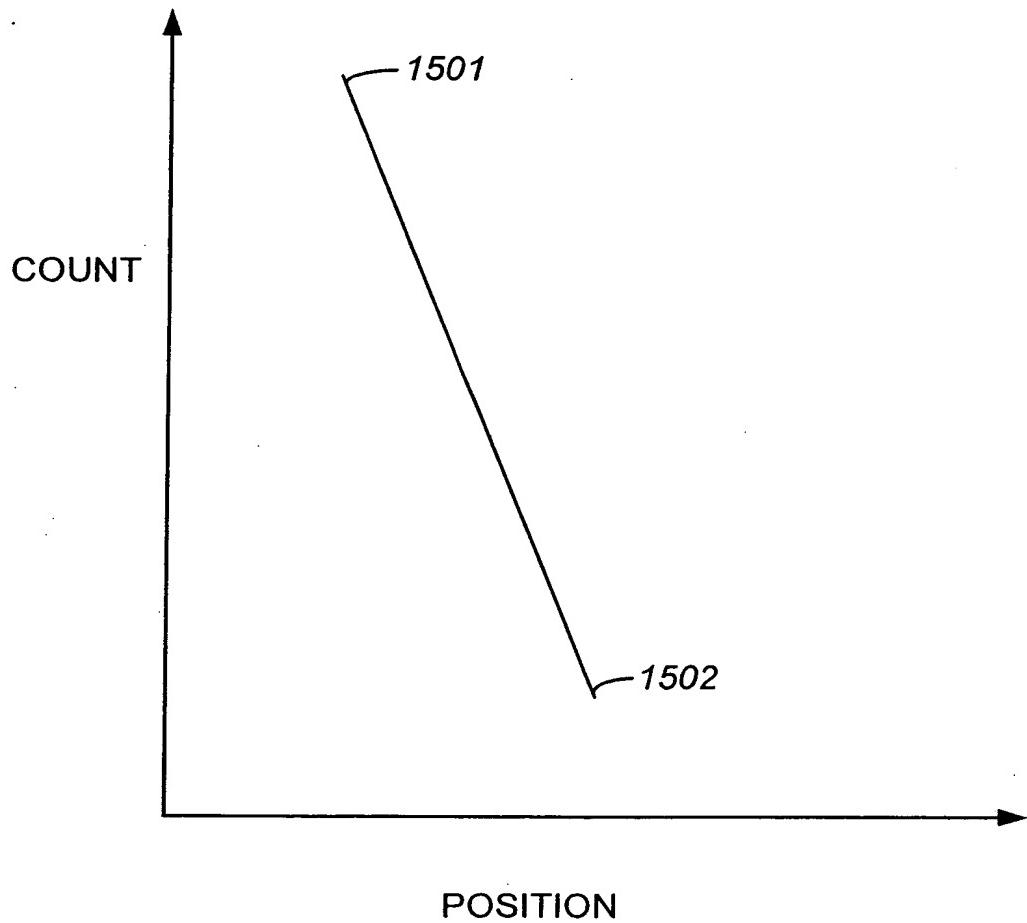


FIG. 16

22/38

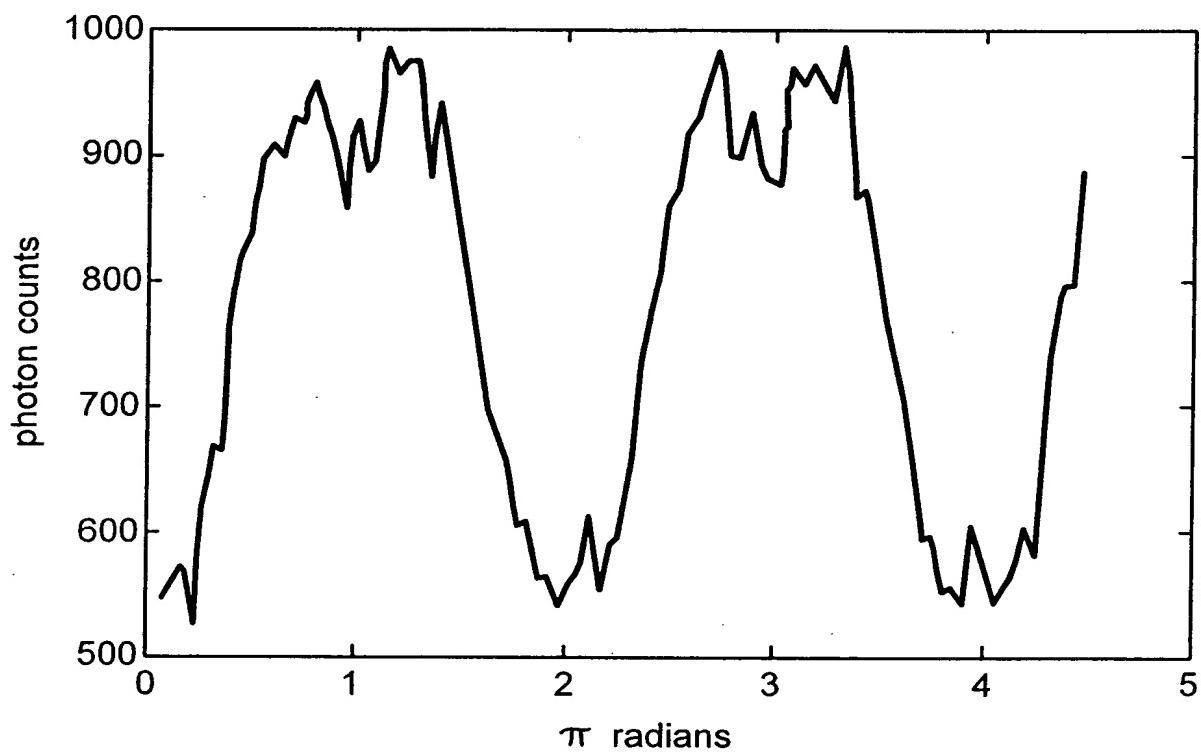


FIG. 17

23/38

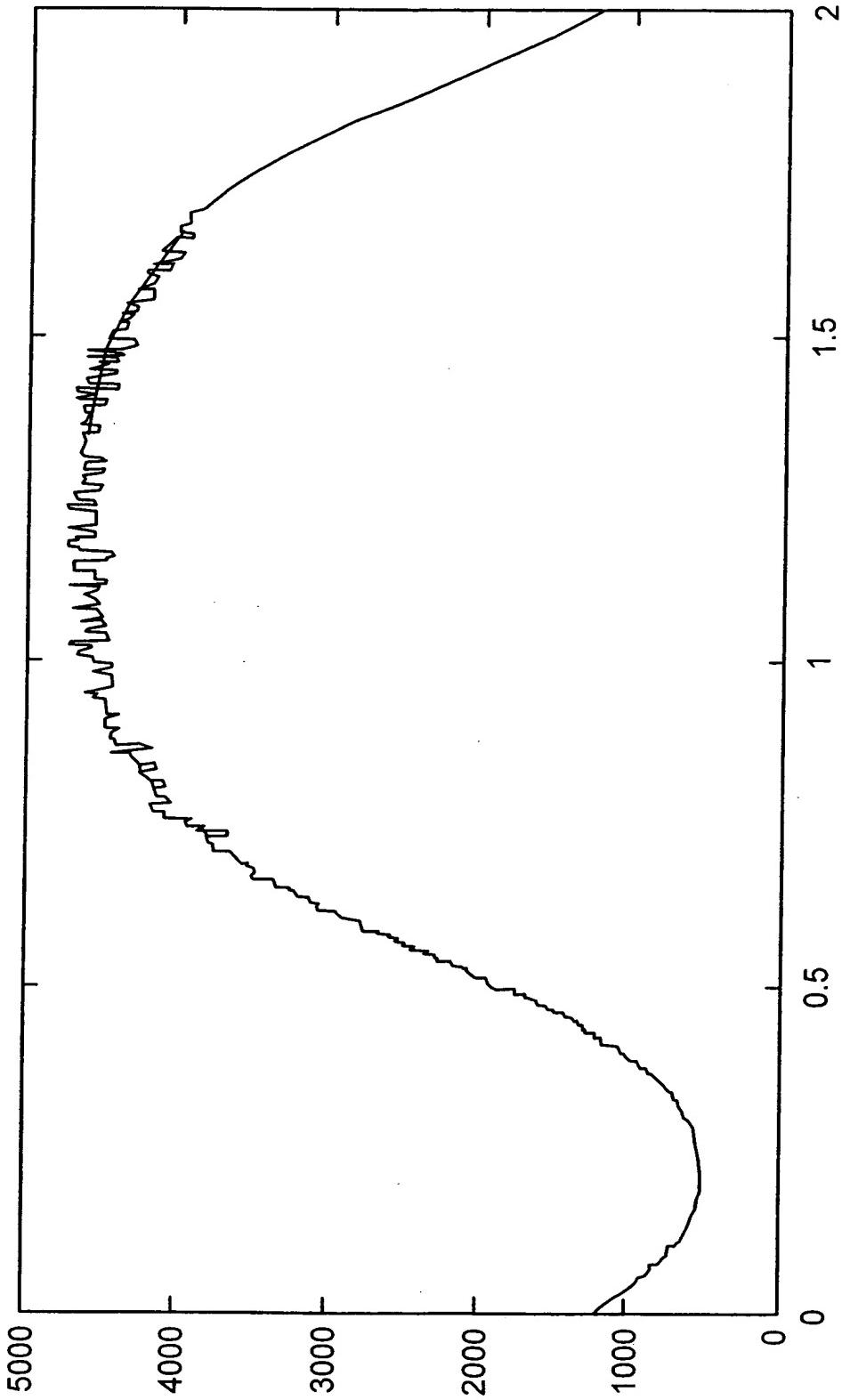


FIG. 18

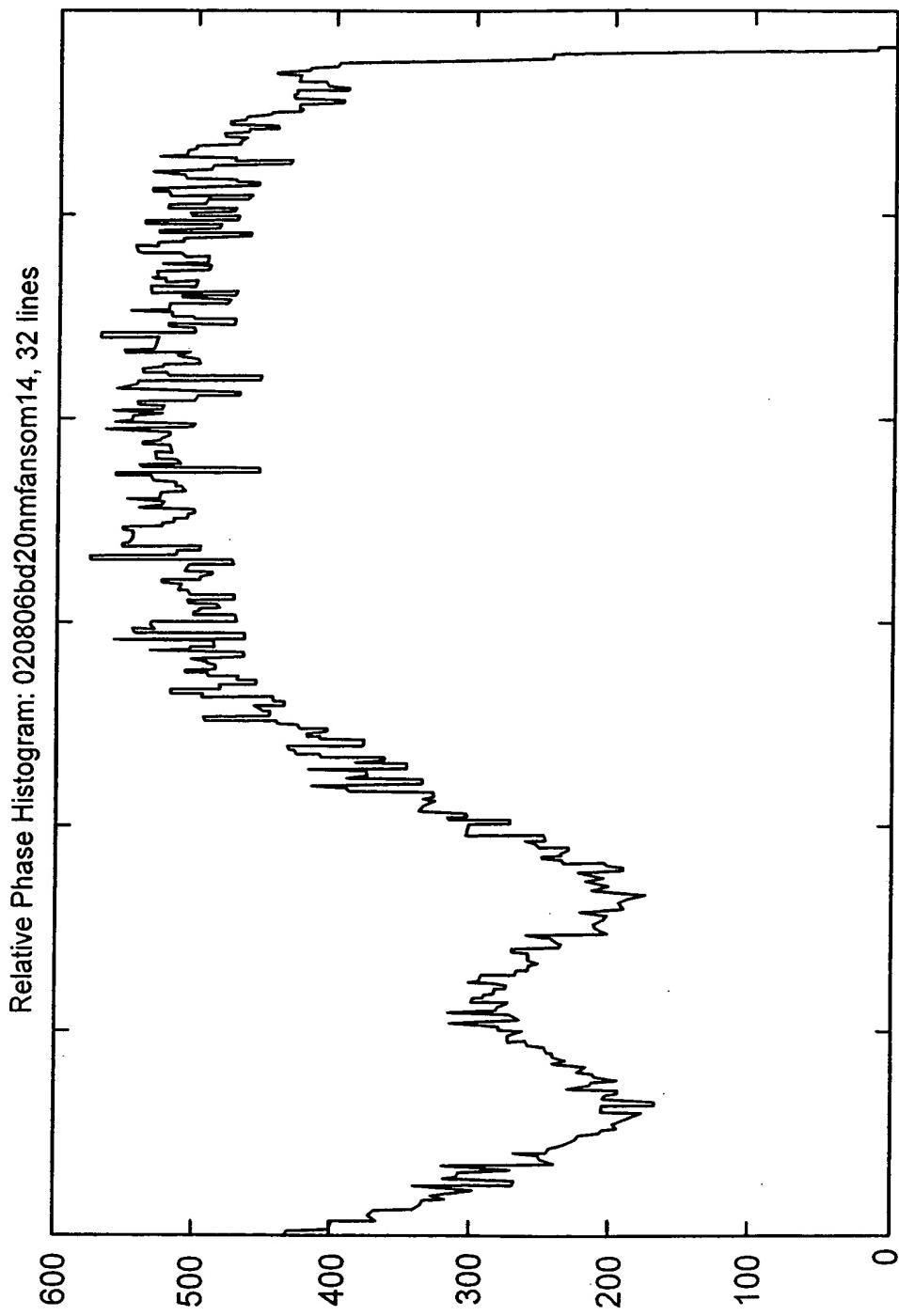


FIG. 19

25/38

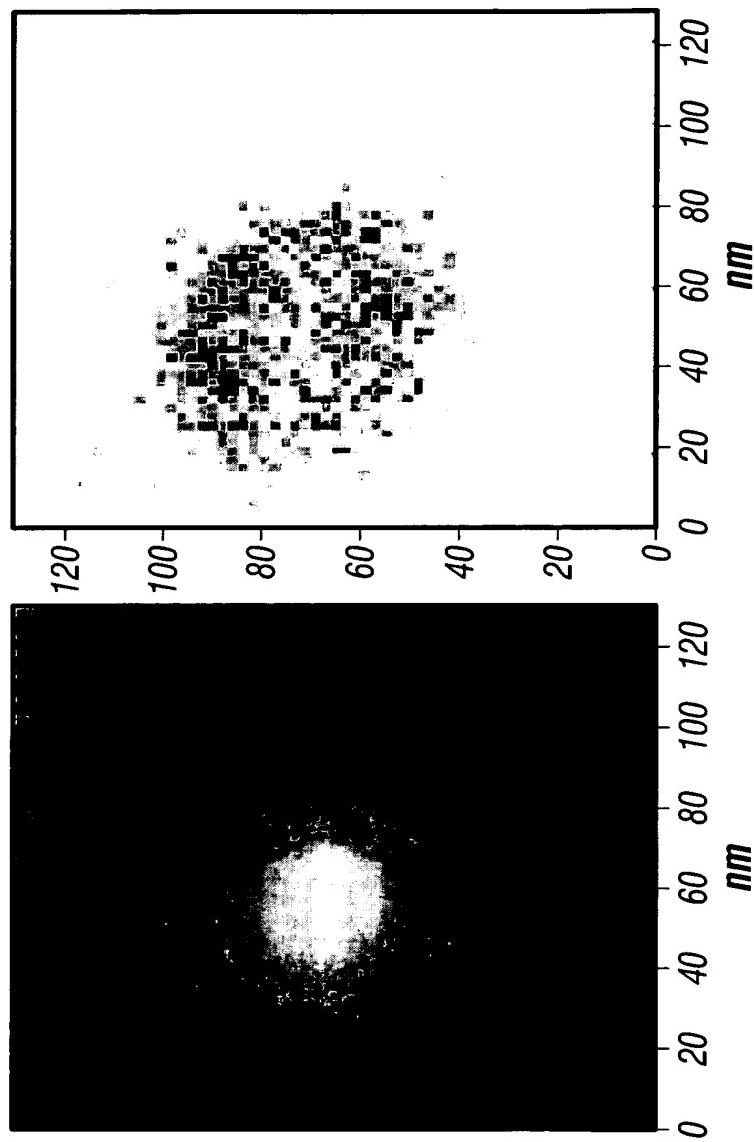


FIG. 20

APPROACH CURVE: FLUORESCENCE AS A FUNCTION OF VERTICAL DISTANCE

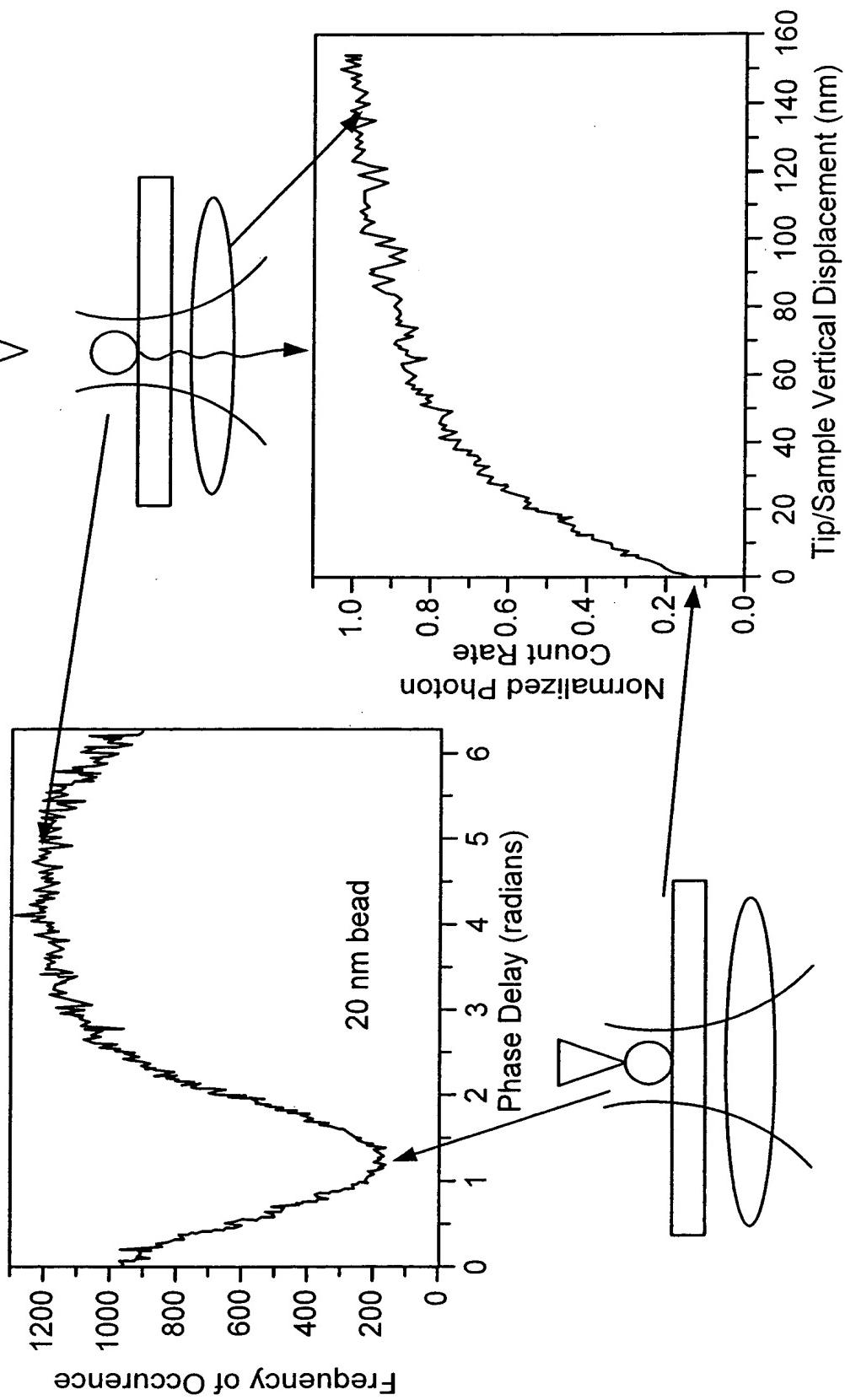
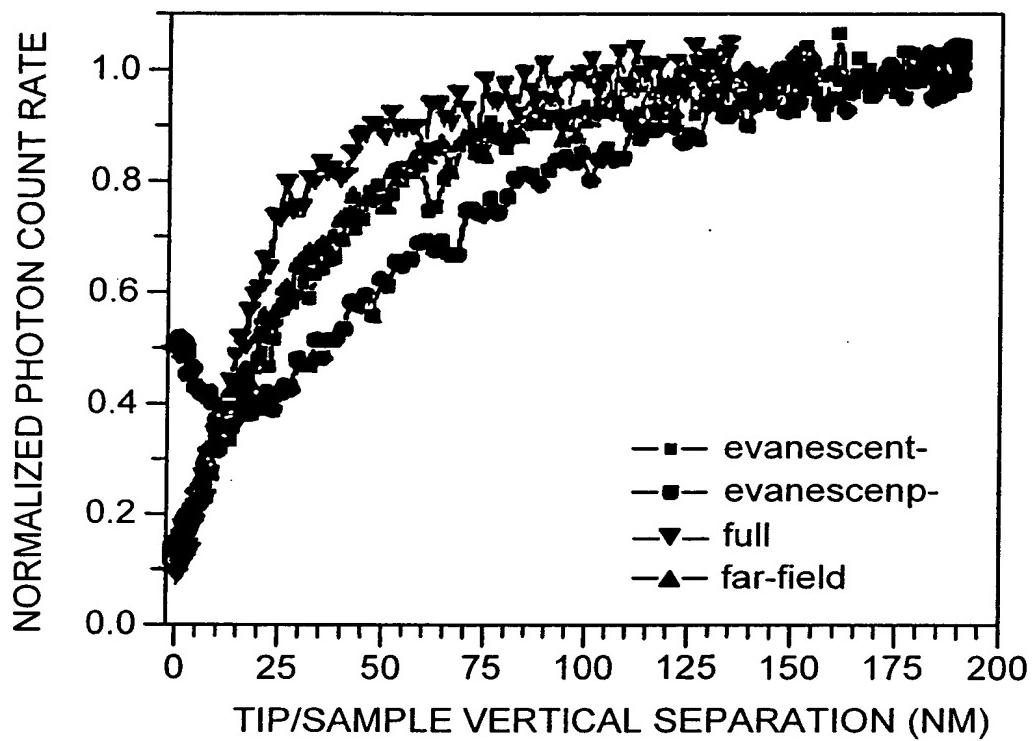


FIG. 20A

METALLIC TIPS



- PLATINUM-IRIDIUM COATED TIPS (COMMERCIAL)
- 85-90% SUPPRESSION OF FLUORESCENCE
- PARTIAL RECOVERY OF FLUORESCENCE FOR *P*-POLARIZATION

FIG. 20B

28/38

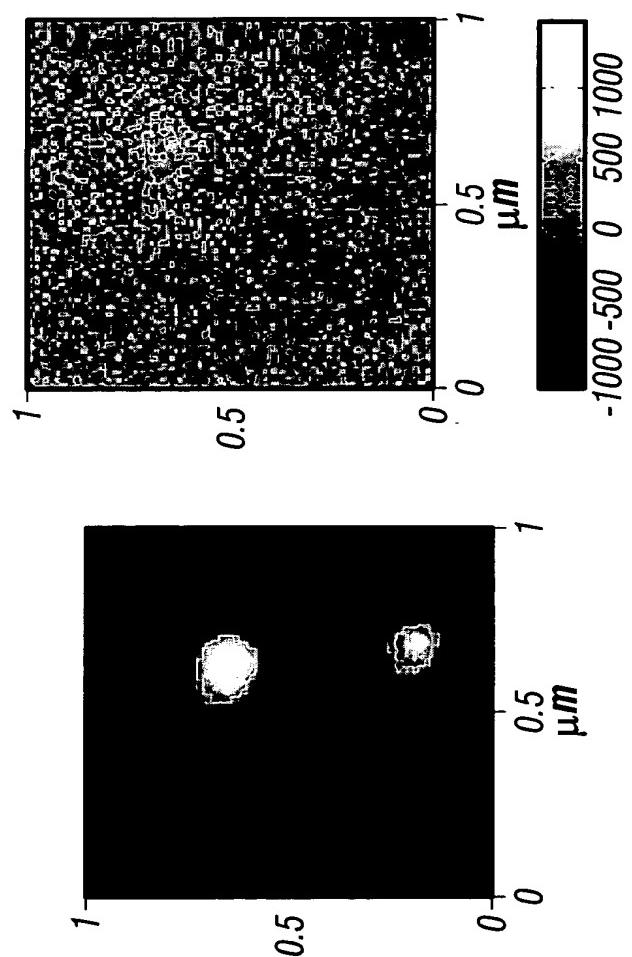


FIG. 21

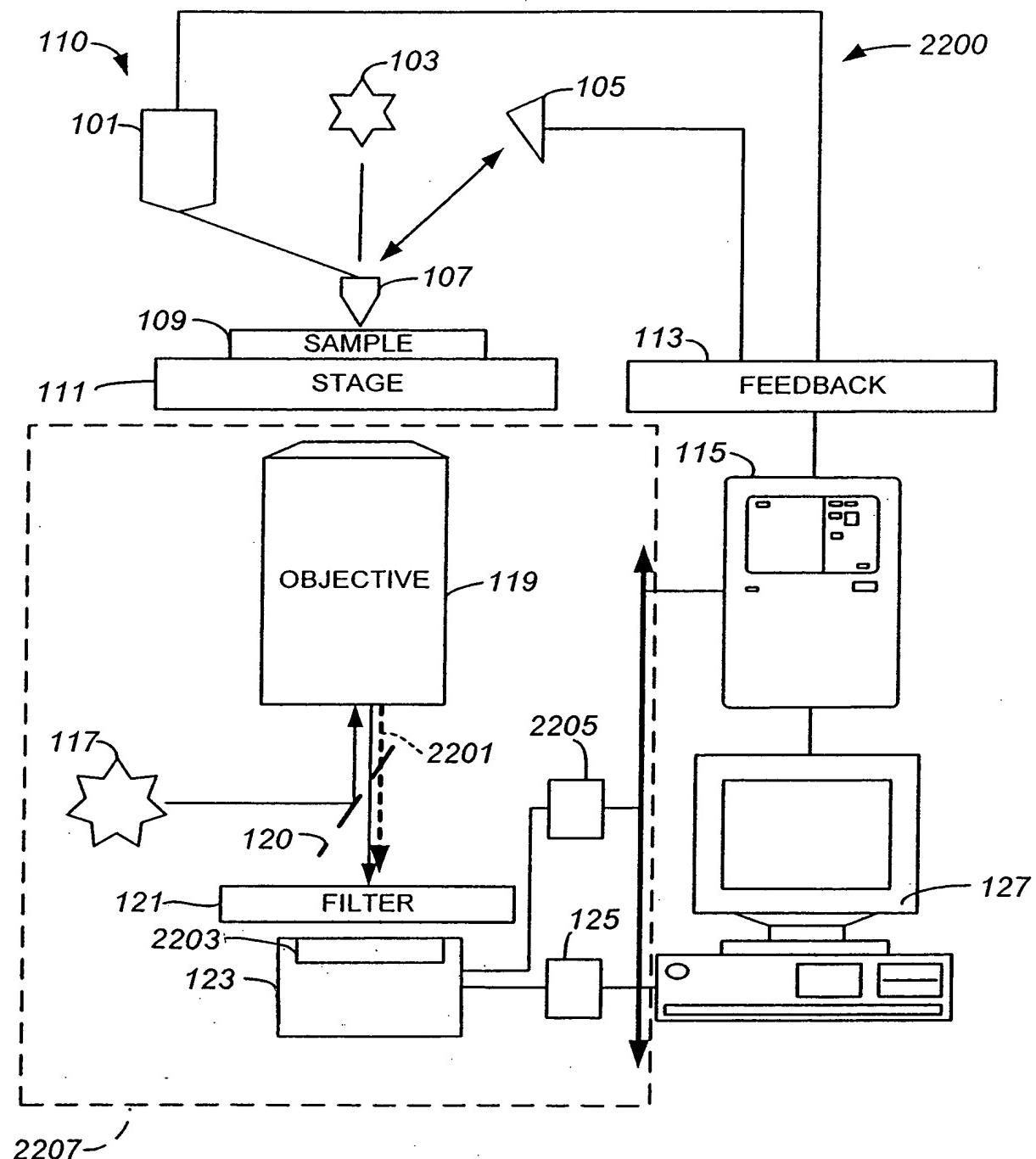


FIG. 22

30/38

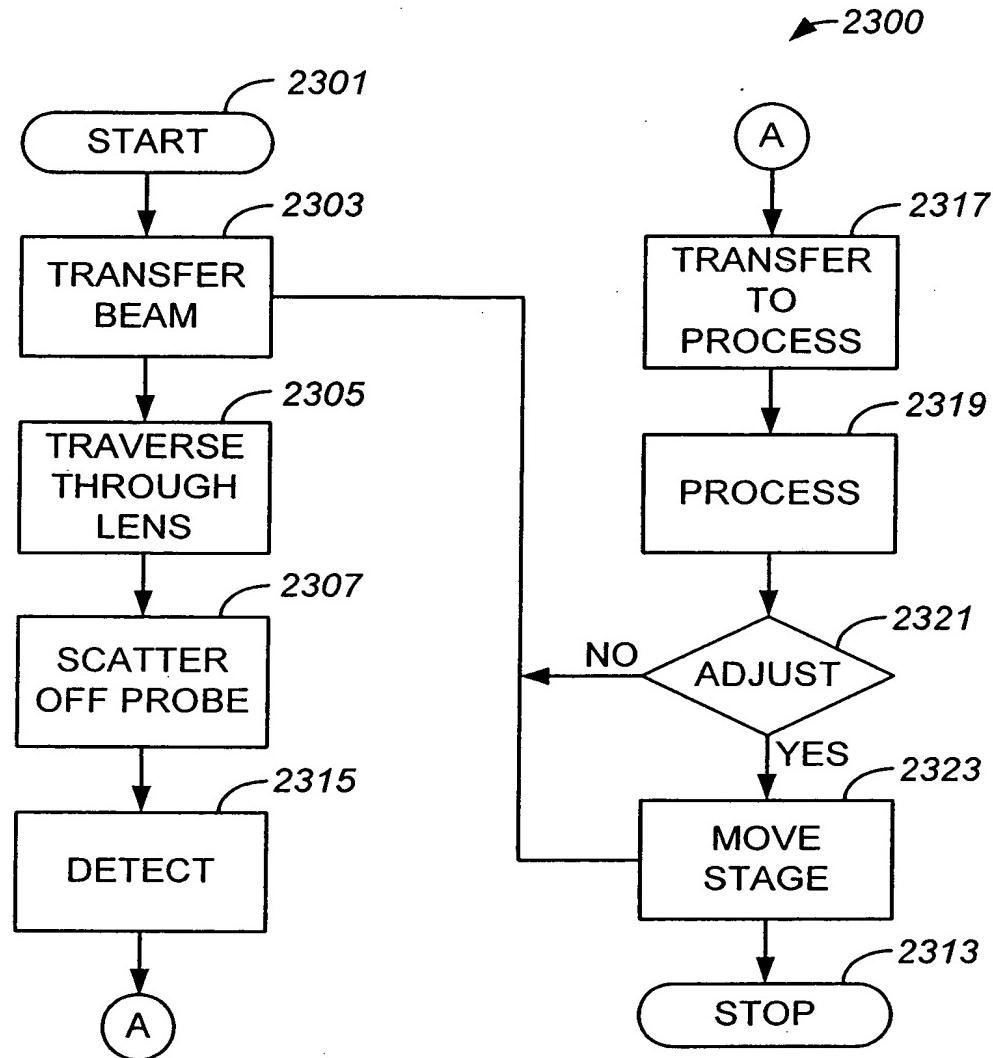


FIG. 23

31/38

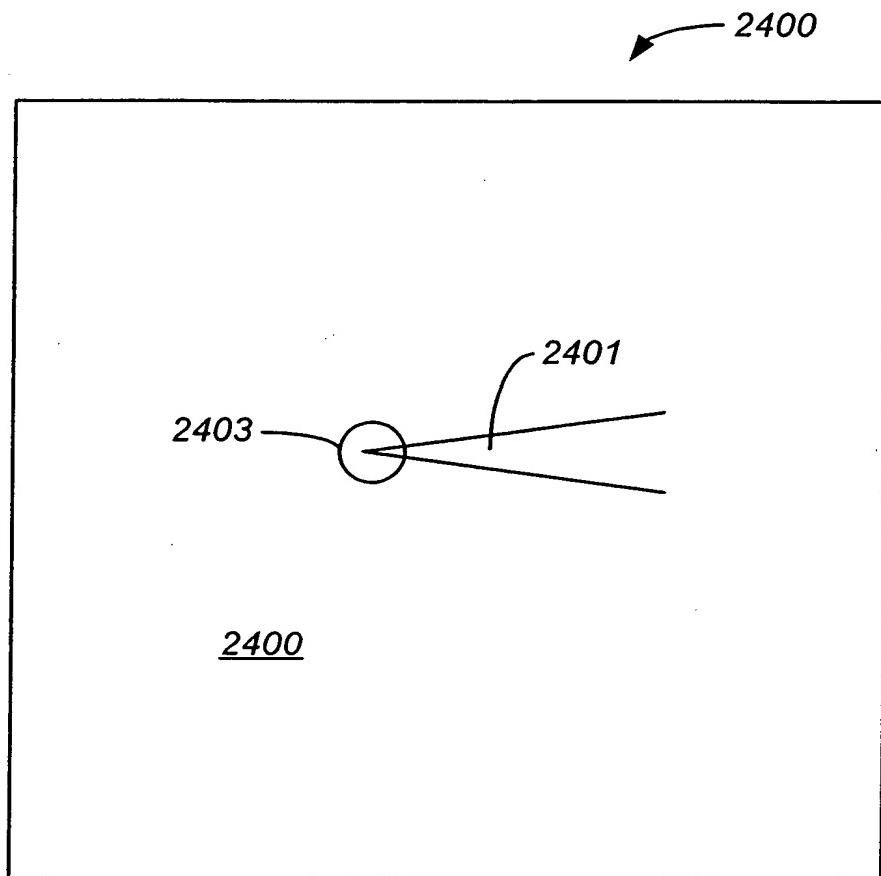


FIG. 24

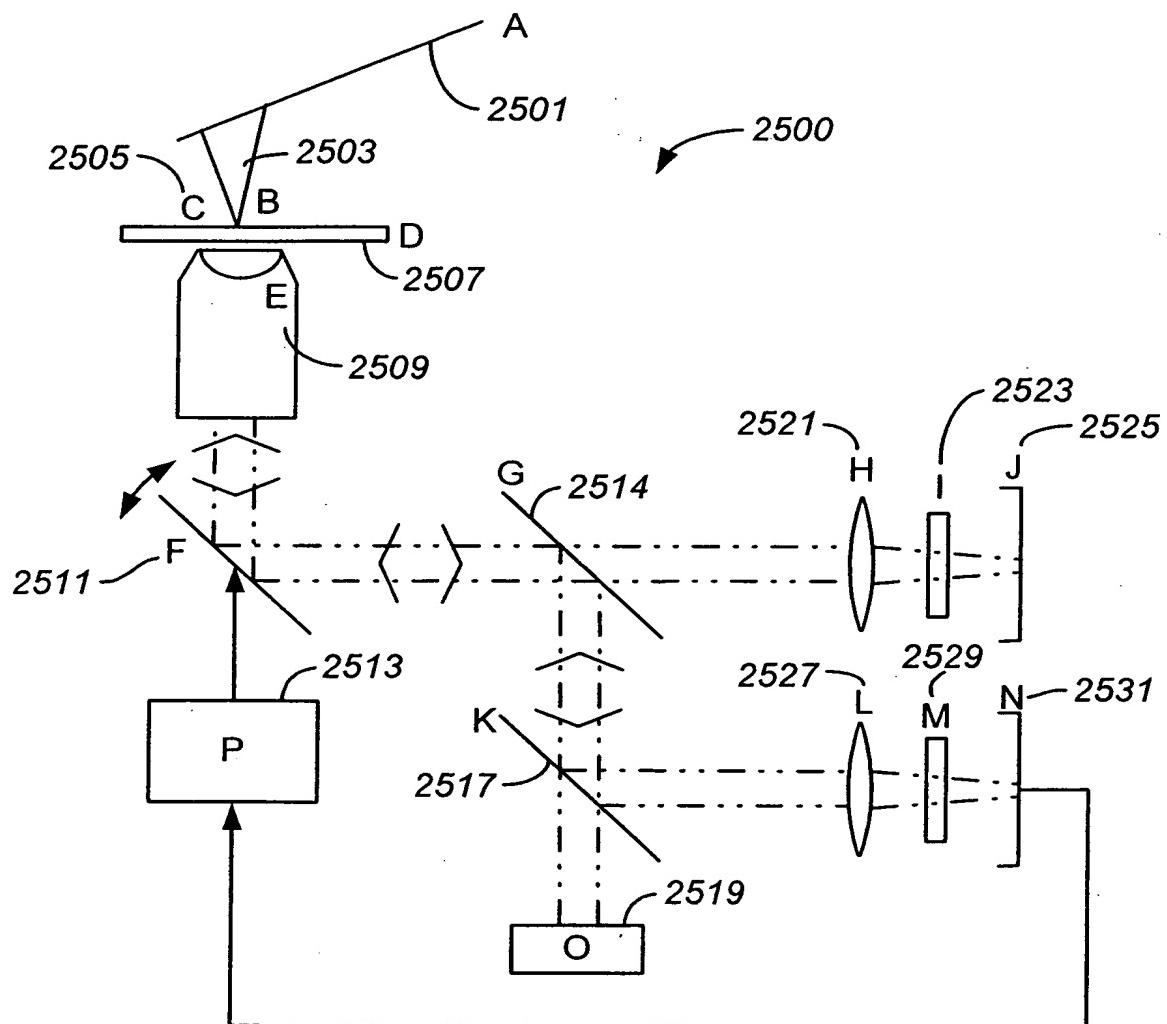


FIG. 25

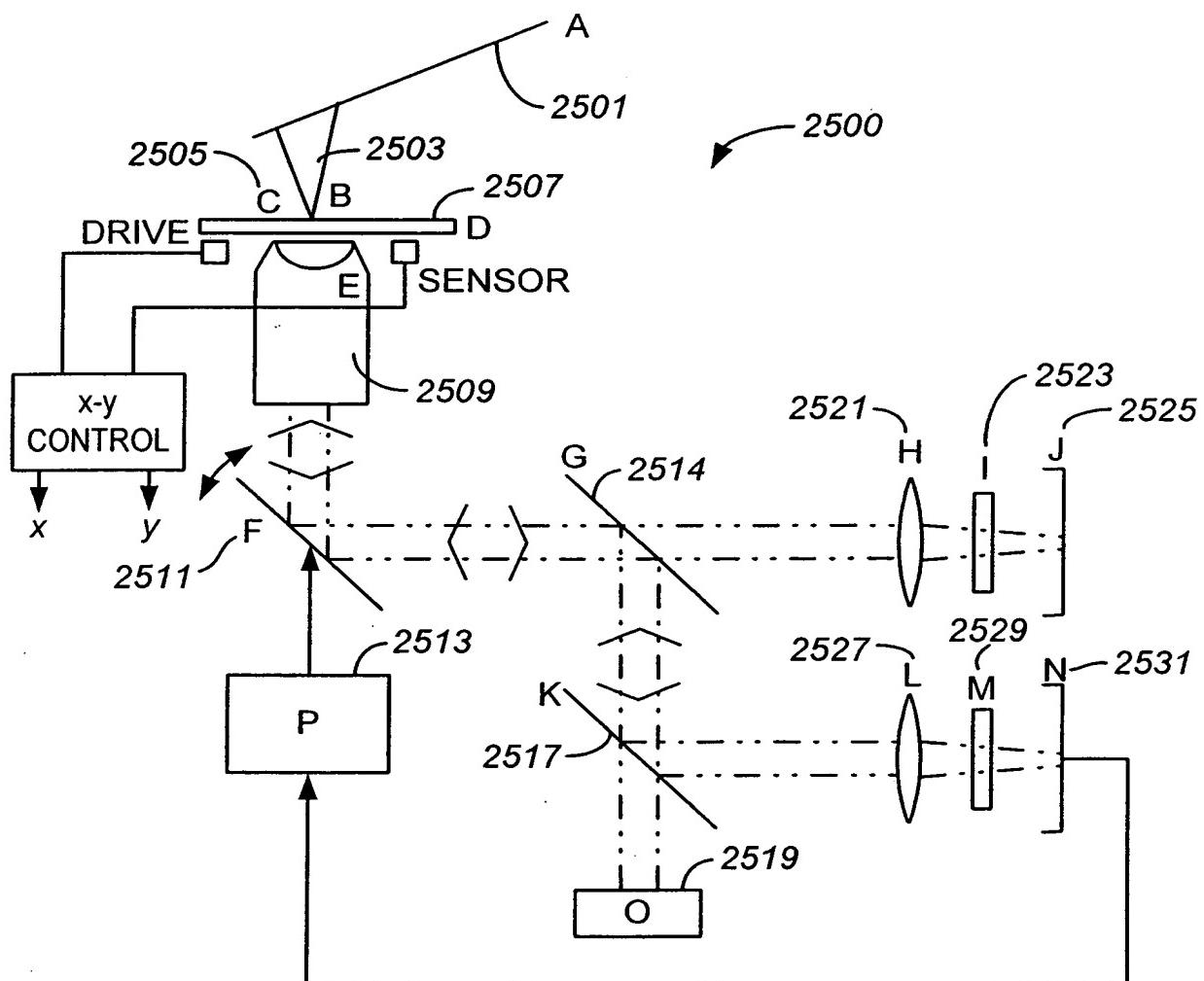


FIG. 25A

FILTER PLACEMENT

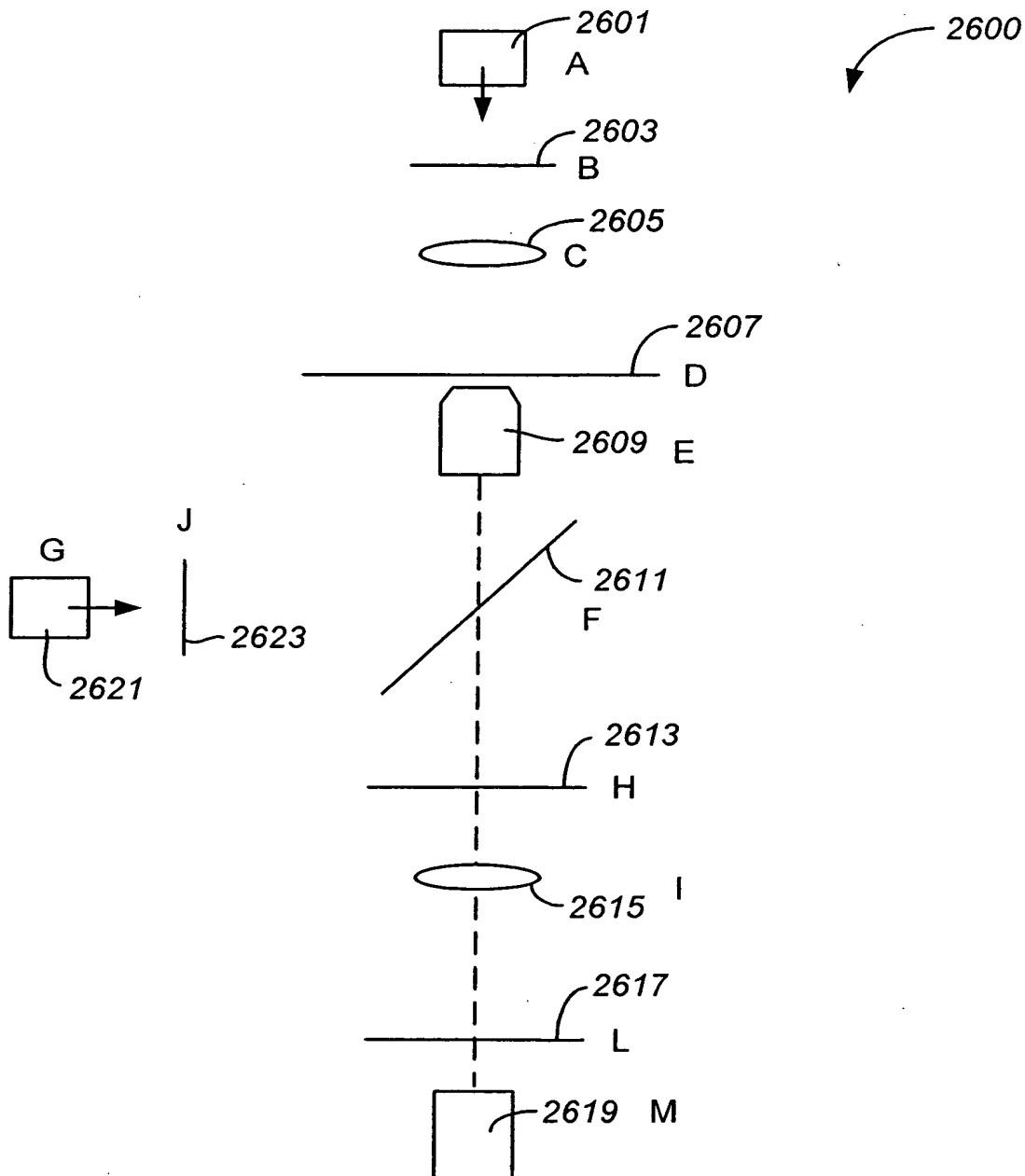


FIG. 26

35/38

SPECTRUM OF AFM LASER

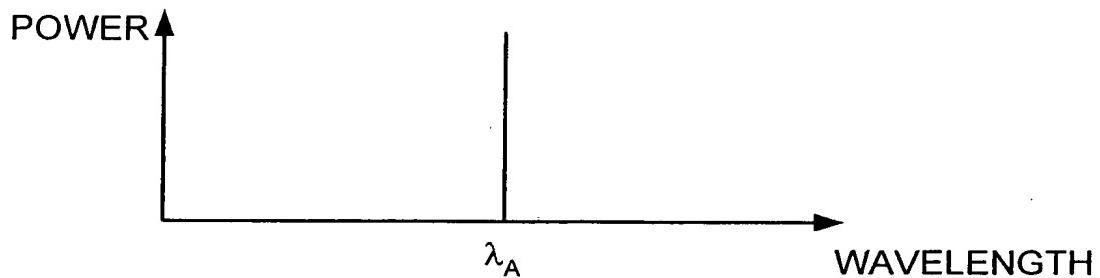


FIG. 27

RELATIVE POSITIONS OF WAVELENGTHS OF INTEREST

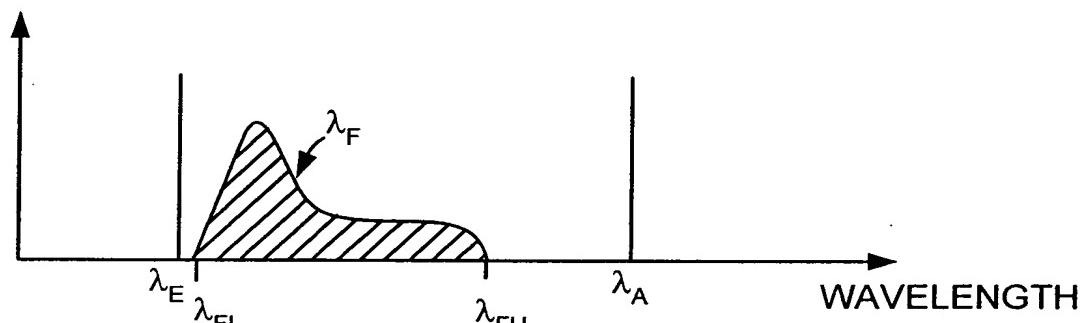


FIG. 28

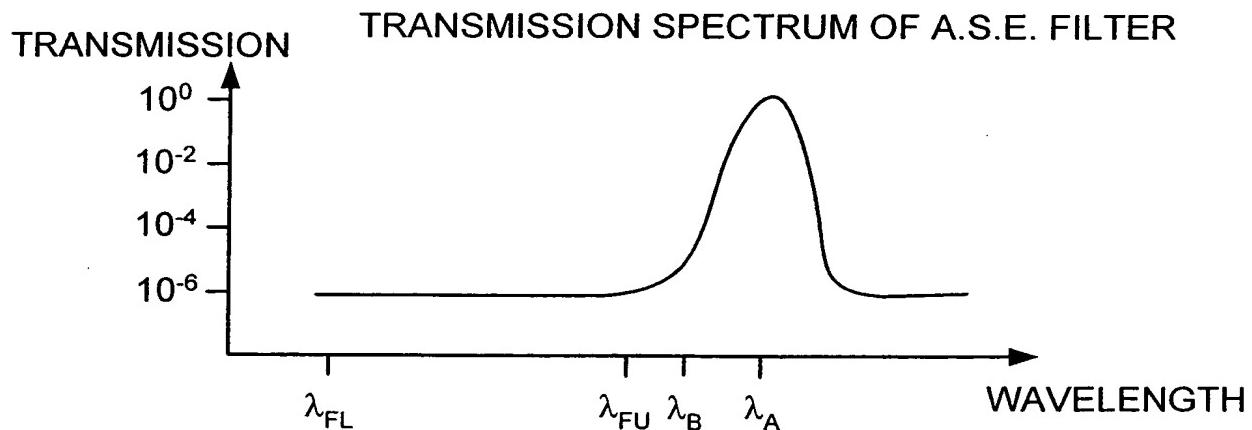


FIG. 29

TRANSMISSION SPECTRUM OF DICHROIC MIRROR

TRANSMITTIVITY

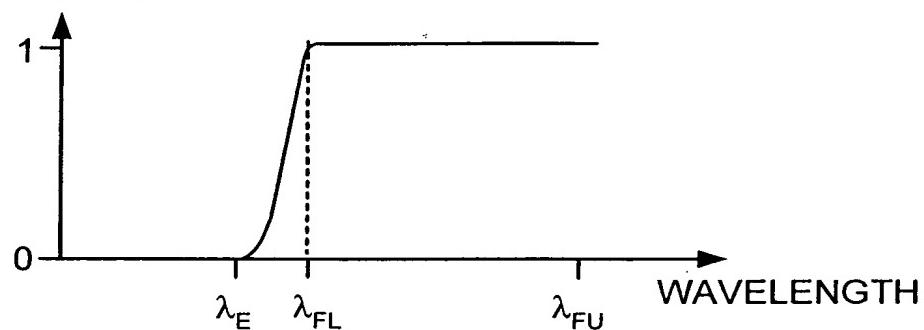


FIG. 30

TRANSMISSION SPECTRUM OF BLOCKING FILTER FOR WAVE LENGTH λ_1

TRANSMISSION

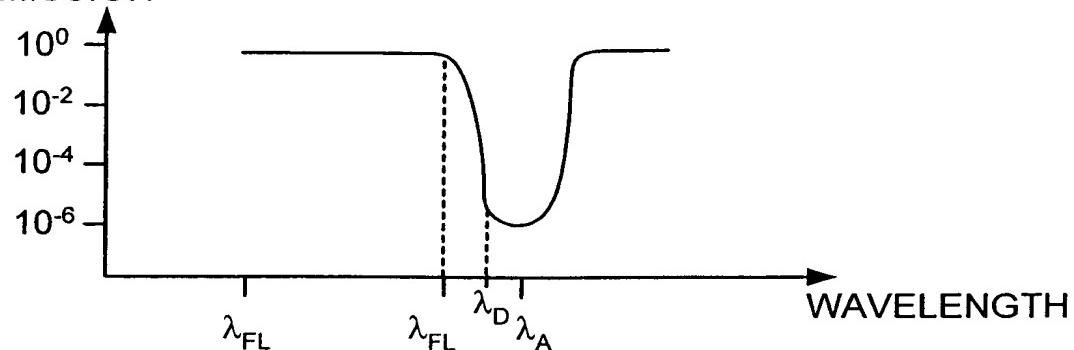


FIG. 31

SPECTRUM OF LASER FOR SAMPLE EXCITATION



FIG. 32

TRANSMISSION SPECTRUM OF THE "EXCITATION CLEAN-UP FILTER"

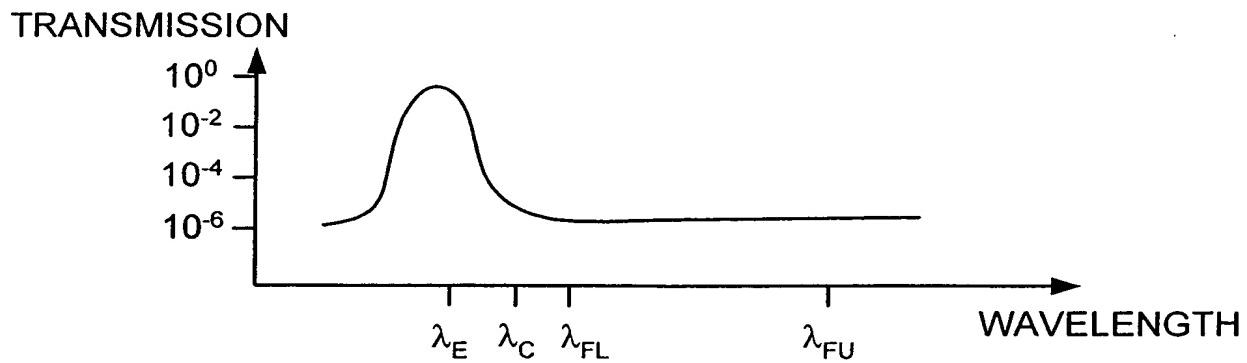


FIG. 33

TRANSMISSION SPECTRUM FOR
"BLOCKING FILTER FOR SAMPLE DETECTOR"

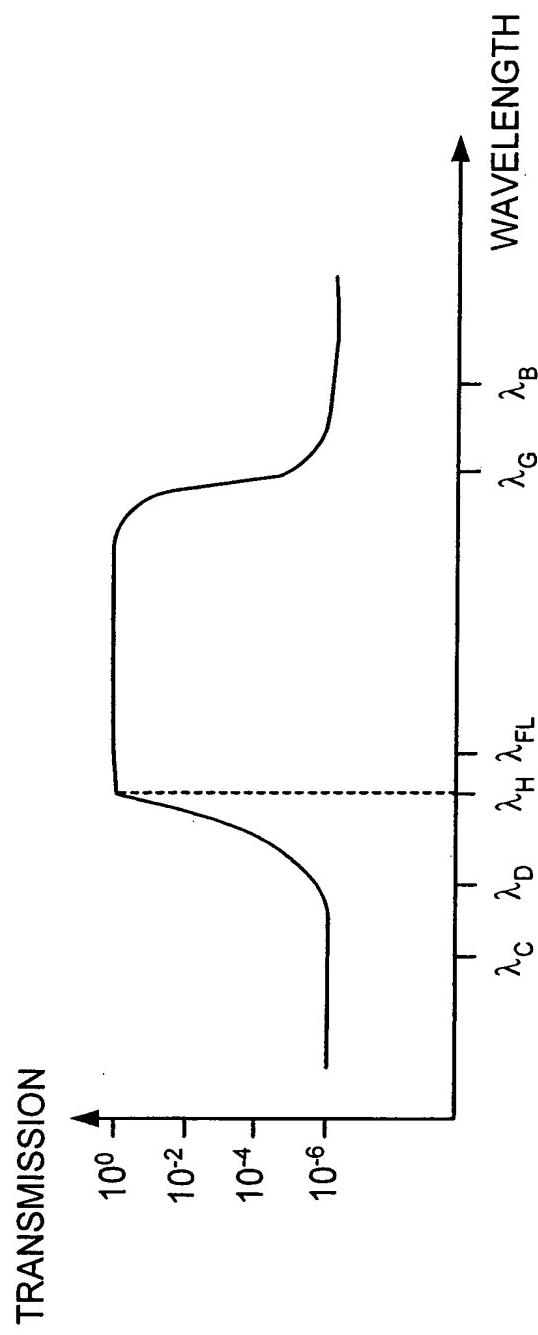


FIG. 34